

SEQUENCE LISTING

<110> MCCARTHY, Sean A
FRASER, Christopher C
SHARP, John D
BARNES, Thomas S
KIRST, Susan J
MACKAY, Charles R
MYERS, Paul S
LEIBY, Kevin R
WRIGHTON, Nicholas
GOODEARL, Andrew
HOLTZMAN, Douglas A

<120> NOVEL GENES ENCODING PROTEINS HAVING PROGNOSTIC,
DIAGNOSTIC, PREVENTIVE, THERAPEUTIC, AND OTHER USES

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Pro Gly Lys Glu Glu Ile Ser Tyr Ile Phe Glu Gly Asp Pro Ile Asp		
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Thr Phe Val Ala Leu Val Arg Val Gln Asp Lys Asp Ser Gly Leu Asn		
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Gln Lys Thr Tyr Glu Asn Asn Tyr Leu Ile Leu Thr Asn Ala Thr Leu		
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Asp Arg Glu Lys Arg Ser Glu Tyr Ser Leu Thr Val Ile Ala Glu Asp		
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Arg Gly Thr Pro Ser Leu Ser Thr Val Lys His Phe Thr Val Gln Ile		
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Asn Asp Ile Asn Asp Asn Pro Pro His Phe Gln Arg Ser Arg Tyr Glu		
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Phe Val Ile Ser Glu Asn Asn Ser Pro Gly Ala Tyr Ile Thr Thr Val		
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Thr Ala Thr Asp Pro Asp Leu Gly Glu Asn Gly Gln Val Thr Tyr Thr		
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Thr Ile Asp Pro Ser Asn Gly Ala Ile Tyr Ala Leu Arg Ile Phe Asp		
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Thr Leu Pro Thr Glu His Leu Gln Leu Phe His Ile Glu Val Glu Val
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Leu Asp Ile Asn Asp Asn Ser Pro Gln Phe Ser Arg Ser Leu Ile Pro
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Glu Leu Lys Ser Ser Tyr Glu Leu Gln Leu Thr Ala Ser Asp Met Gly
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Thr Asp Pro Asp Glu Gly Ala Asn Gly Lys Ile Val Tyr Ser Phe Ser
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Ser His Val Ser Pro Lys Ile Met Glu Thr Phe Lys Ile Asp Ser Glu
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Ile Glu Val Glu Val Leu Asp Ile Asn Asp Asn Ser Pro Gln Phe Ser
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Arg Gln Ser

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Leu Glu Arg Gly Gln Met Gly Ser Arg Gln Ser His Asn Ser His Gln
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Asn Phe Ser Leu Glu Leu Thr His Ala Thr Pro Ala Val Glu Val Ser
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Gln Leu Leu Ser Met Leu His Gln Gly Gln Tyr Gln Pro Arg Pro Ser
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Phe Arg Gly Asn Lys Tyr Ser Arg Ser Tyr Arg Tyr Ala Leu Gln Asp
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Lys Phe Gln Val Thr Glu Glu Val Pro Ser Gly Thr Val Ile Gly Lys
 35 40 45

Asp Ala Phe Gln Ile Leu Gln Leu Pro Gln Ala Leu Pro Val Gln Met
 50 55 60

Asn Ser Glu Asp Gly Leu Leu Ser Thr Ser Ser Arg Leu Asp Arg Glu
 65 70 75 80

Lys Leu Cys Arg Gln Glu Asp Pro Cys Leu Val Ser Phe Asp Val Leu
 85 90 95

Ala Thr Gly Ala Ser Ala Leu Ile His Val Glu Ile Gln Val Leu Asp
 100 105 110

Ile Asn Asp His Gln Pro Gln Phe Pro Lys Asp Glu Gln Glu Leu Glu
 115 120 125

Ile Ser Glu Ser Ala Ser Leu His Thr Arg Ile Pro Leu Asp Arg Ala
 130 135 140

Leu Asp Gln Asp Thr Gly Pro Asn Ser Leu Tyr Ser Tyr Ser Leu Ser
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Pro Ser Glu His Phe Ala Leu Asp Val Ile Val Gly Pro Asp Glu Thr
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Cys	Arg	Glu	Ala	Glu	Ser	Ser	Tyr	Arg	His	Gln	Pro	Lys	Arg	Pro	Gln	740	745	750	
Lys	His	Ile	Gln	Lys	Ala	Asp	Ile	His	Leu	Val	Pro	Val	Leu	Arg	Ala	755	760	765	
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Phe	His	Leu	Thr	Pro	Thr	Leu	Tyr	Arg	Thr	Leu	Arg	Asn	Gln	Gly	Asn	805	810	815	
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Lys	Glu	Glu	Ala	Pro	Gln	Ser	Pro	Pro	Ala	Ser	Ser	Ala	Thr	Leu	Arg	885	890	895	
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Pro	His	Gln	Ile	Leu	Arg	Ser	Leu	Val	Arg	Leu	Ser	Val	Ala	Ala	Phe	915	920	925	
Ala	Glu	Arg	Asn	Pro	Val	Glu	Glu	Pro	Ala	Gly	Asp	Ser	Pro	Pro	Val	930	935	940	

Gln Gln Ile Ser Gln Leu Leu Ser Leu Leu His Gln Gly Gln Phe Gln
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Pro Lys Pro Asn His Arg Gly Asn Lys Tyr Leu Ala Lys Pro Gly Gly
 965 970 975

Ser Ser Arg Gly Thr Ile Pro Asp Thr Glu Gly Leu Val Gly Leu Lys
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Pro Ser Gly Gln Ala Glu Pro Asp Leu Glu Glu Gly Pro Pro Ser Pro
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Leu Ser Ser Leu Leu Asp Pro Asn Thr Gly Leu Ala Leu Asp Lys Leu
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Ser Glu Glu Pro Arg Thr Phe Gln Thr Phe Gly Lys Thr Val Gly Pro
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Gly Pro Glu Leu Ser Pro Thr Gly Thr Arg Leu Ala Ser Thr Phe Val
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Ser Glu Met Ser Ser Leu Leu Glu Met Leu Leu Gly Gln His Thr Val
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Pro Val Glu Ala Ala Ser Ala Ala Leu Arg Arg Leu Ser Val Cys Gly
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 Trp Glu Lys Gln Thr Gln Lys Phe Pro His Pro Ile Glu Ile Ser Glu
 180 185 190

Asp Val Ile Thr Gly Pro Thr Ile Lys Asn Met Asp Gly Thr Phe Asn
195 200 205

Val Thr Ser Cys Leu Lys Leu Asn Ser Ser Gln Glu Asp Pro Gly Thr
210 215 220

Val Tyr Gln Cys Val Val Arg His Ala Ser Leu His Thr Pro Leu Arg
225 230 235 240

Ser Asn Phe Thr Leu Thr Ala Ala Arg His Ser Leu Ser Glu Thr Glu
245 250 255

Lys Thr Asp Asn Phe Ser Ile His Trp Trp Pro Ile Ser Phe Ile Gly
260 265 270

Val Gly Leu Val Leu Leu Ile Val Leu Ile Pro Trp Lys Lys Val Arg
275 280 285

Gly Ser Lys Ala Lys Phe Ser Pro Val Ser Trp Ala Ser Lys Lys Leu
290 295 300

Leu Glu Gln Leu Leu Pro Thr Leu Gln Ala Ser Arg Asp Arg Pro Ala
305 310 315 320

Gly Lys Asp Phe Val Ser Pro Ser Ser Pro Ser Gly Val Gly Asn Val
325 330 335

Gly Cys Val Pro Ile Gln Phe Pro Ile Thr Glu Asp Leu Ala Val Thr
340 345 350

Tyr His Leu Thr Ser Val Trp Trp Phe Val Thr Leu Gly
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<210> 54

<211> 341

<212> PRT

<213> Homo sapiens

<400> 54

Asp Leu Lys Val Glu Met Met Ala Gly Gly Thr Gln Ile Thr Pro Leu
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20 25 30

Asn Ile Thr Ser Met Gly Ile Thr Trp Phe Trp Lys Ser Leu Thr Phe

35	40	45
Asp Lys Glu Val Lys Val Phe Glu Phe Phe Gly Asp His Gln Glu Ala		
50	55	60
Phe Arg Pro Gly Ala Ile Val Ser Pro Trp Arg Leu Lys Ser Gly Asp		
65	70	75 80
Ala Ser Leu Arg Leu Pro Gly Ile Gln Leu Glu Glu Ala Gly Glu Tyr		
85	90	95
Arg Cys Glu Val Val Val Thr Pro Leu Lys Ala Gln Gly Thr Val Gln		
100	105	110
Leu Glu Val Val Ala Ser Pro Ala Ser Arg Leu Leu Leu Asp Gln Val		
115	120	125
Gly Met Lys Glu Asn Glu Asp Lys Tyr Met Cys Glu Ser Ser Gly Phe		
130	135	140
Tyr Pro Glu Ala Ile Asn Ile Thr Trp Glu Lys Gln Thr Gln Lys Phe		
145	150	155 160
Pro His Pro Ile Glu Ile Ser Glu Asp Val Ile Thr Gly Pro Thr Ile		
165	170	175
Lys Asn Met Asp Gly Thr Phe Asn Val Thr Ser Cys Leu Lys Leu Asn		
180	185	190
Ser Ser Gln Glu Asp Pro Gly Thr Val Tyr Gln Cys Val Val Arg His		
195	200	205
Ala Ser Leu His Thr Pro Leu Arg Ser Asn Phe Thr Leu Thr Ala Ala		
210	215	220
Arg His Ser Leu Ser Glu Thr Glu Lys Thr Asp Asn Phe Ser Ile His		
225	230	235 240
Trp Trp Pro Ile Ser Phe Ile Gly Val Gly Leu Val Leu Leu Ile Val		
245	250	255
Leu Ile Pro Trp Lys Lys Val Arg Gly Ser Lys Ala Lys Phe Ser Pro		
260	265	270
Val Ser Trp Ala Ser Lys Lys Leu Leu Glu Gln Leu Leu Pro Thr Leu		
275	280	285
Gln Ala Ser Arg Asp Arg Pro Ala Gly Lys Asp Phe Val Ser Pro Ser		

290

295

300

Ser Pro Ser Gly Val Gly Asn Val Gly Cys Val Pro Ile Gln Phe Pro
 305 310 315 320

Ile Thr Glu Asp Leu Ala Val Thr Tyr His Leu Thr Ser Val Trp Trp
 325 330 335

Phe Val Thr Leu Gly
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<210> 55

<211> 24

<212> PRT

<213> Homo sapiens

<400> 55

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Leu Trp Ala Leu Thr Thr Glu Gly
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<210> 56

<211> 239

<212> PRT

<213> Homo sapiens

<400> 56

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Asp Asn Val Thr Ile Phe Cys Asn Ile Phe Tyr Ser Gln Pro Leu Asn
 20 25 30

Ile Thr Ser Met Gly Ile Thr Trp Phe Trp Lys Ser Leu Thr Phe Asp
 35 40 45

Lys Glu Val Lys Val Phe Glu Phe Phe Gly Asp His Gln Glu Ala Phe
 50 55 60

Arg Pro Gly Ala Ile Val Ser Pro Trp Arg Leu Lys Ser Gly Asp Ala
 65 70 75 80

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65

70

75

80

Arg Cys Glu Val

<210> 58

<211> 68

<212> PRT

<213> Homo sapiens

<400> 58

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 20 25 30

Ile Thr Gly Pro Thr Ile Lys Asn Met Asp Gly Thr Phe Asn Val Thr
 35 40 45

Ser Cys Leu Lys Leu Asn Ser Ser Gln Glu Asp Pro Gly Thr Val Tyr
 50 55 60

Gln Cys Val Val
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<210> 59

<211> 18

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<213> Homo sapiens

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Leu Ile

<210> 60

<211> 83

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 20 25 30
 Ser Arg Asp Arg Pro Ala Gly Lys Asp Phe Val Ser Pro Ser Ser Pro
 35 40 45
 Ser Gly Val Gly Asn Val Gly Cys Val Pro Ile Gln Phe Pro Ile Thr
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 Glu Asp Leu Ala Val Thr Tyr His Leu Thr Ser Val Trp Trp Phe Val
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 Thr Leu Gly

<210> 61
 <211> 1402
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 <213> Homo sapiens

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<210> 71

<211> 3594
 <212> DNA
 <213> Homo sapiens

<400> 71

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<210> 72

<211> 2145

<212> DNA

<213> Homo sapiens

<400> 72

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<210> 73

<211> 715

<212> PRT

<213> Homo sapiens

<400> 73

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          20             25             30

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```

Gln Ala Glu Glu Leu Gly Asp Gly Cys Gly His Leu Val Thr Tyr Gln
    35             40             45

```

```

Asp Ser Gly Thr Met Thr Ser Lys Asn Tyr Pro Gly Thr Tyr Pro Asn
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```

His Thr Val Cys Glu Lys Thr Ile Thr Val Pro Lys Gly Lys Arg Leu
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```

Ile Leu Arg Leu Gly Asp Leu Asp Ile Glu Ser Gln Thr Cys Ala Ser
          85             90             95

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```

Asp Tyr Leu Leu Phe Thr Ser Ser Ser Asp Gln Tyr Gly Pro Tyr Cys
    100             105             110

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Gly Ser Met Thr Val Pro Lys Glu Leu Leu Leu Asn Thr Ser Glu Val
    115             120             125

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Thr Val Arg Phe Glu Ser Gly Ser His Ile Ser Gly Arg Gly Phe Leu
    130             135             140

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Gly Cys Arg Asp Val Ala Gly Asp Ile Ser Gly Asn Met Val Asp Gly			
	180	185	190
Tyr Arg Asp Thr Ser Leu Leu Cys Lys Ala Ala Ile His Ala Gly Ile			
	195	200	205
Ile Ala Asp Glu Leu Gly Gly Gln Ile Ser Val Leu Gln Arg Lys Gly			
	210	215	220
Ile Ser Arg Tyr Glu Gly Ile Leu Ala Asn Gly Val Leu Ser Arg Asp			
225	230	235	240
Gly Ser Leu Ser Asp Lys Arg Phe Leu Phe Thr Ser Asn Gly Cys Ser			
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Arg Ser Leu Ser Phe Glu Pro Asp Gly Gln Ile Arg Ala Ser Ser Ser			
	260	265	270
Trp Gln Ser Val Asn Glu Ser Gly Asp Gln Val His Trp Ser Pro Gly			
	275	280	285
Gln Ala Arg Leu Gln Asp Gln Gly Pro Ser Trp Ala Ser Gly Asp Ser			
	290	295	300
Ser Asn Asn His Lys Pro Arg Glu Trp Leu Glu Ile Asp Leu Gly Glu			
305	310	315	320
Lys Lys Lys Ile Thr Gly Ile Arg Thr Thr Gly Ser Thr Gln Ser Asn			
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Phe Asn Phe Tyr Val Lys Ser Phe Val Met Asn Phe Lys Asn Asn Asn			
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Ser Lys Trp Lys Thr Tyr Lys Gly Ile Val Asn Asn Glu Glu Lys Val			
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Phe Gln Gly Asn Ser Asn Phe Arg Asp Pro Val Gln Asn Asn Phe Ile			
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Pro Pro Ile Val Ala Arg Tyr Val Arg Val Val Pro Gln Thr Trp His			
385	390	395	400

Ser Ala Gln Pro Ala Asp Arg Gly Tyr Asp Arg Pro Lys Ala Val Ser
660 665 670

Ala Leu Ala Thr Glu Ser Gly His Pro Asp Ser Gln Lys Pro Pro Thr
675 680 685

His Pro Gly Thr Ser Asp Ser Tyr Ser Ala Pro Arg Asp Cys Leu Thr
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Pro Leu Asn Gln Thr Ala Met Thr Ala Leu Leu
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<210> 74

<211> 34

<212> PRT

<213> Homo sapiens

<400> 74

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Arg Gly Leu Leu Ala Leu Leu Leu Ala Val Ser Ala Pro Leu Arg Leu
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Gln Ala

<210> 75

<211> 681

<212> PRT

<213> Homo sapiens

<400> 75

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Gly Thr Met Thr Ser Lys Asn Tyr Pro Gly Thr Tyr Pro Asn His Thr
20 25 30

Val Cys Glu Lys Thr Ile Thr Val Pro Lys Gly Lys Arg Leu Ile Leu
35 40 45

Arg Leu Gly Asp Leu Asp Ile Glu Ser Gln Thr Cys Ala Ser Asp Tyr
50 55 60

Leu Leu Phe Thr Ser Ser Ser Asp Gln Tyr Gly Pro Tyr Cys Gly Ser

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Asn His Lys Pro Arg Glu Trp Leu Glu Ile Asp Leu Gly Glu Lys Lys
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Phe Tyr Val Lys Ser Phe Val Met Asn Phe Lys Asn Asn Asn Ser Lys
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 <212> DNA
 <213> Homo sapiens

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<212> PRT

<213> Homo sapiens

<400> 85

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35 40 45

Trp Glu Phe Tyr Gln Ala Arg Cys Phe Phe Leu Ser Thr Ser Glu Ser
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Ser Trp Asn Glu Ser Arg Asp Phe Cys Lys Gly Lys Gly Ser Thr Leu
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Asp Ala Glu Lys Tyr Phe Ile Gly Leu Ile Tyr His Arg Glu Glu Lys
100 105 110

Arg Trp Arg Trp Ile Asn Asn Ser Val Phe Asn Gly Asn Val Thr Asn
115 120 125

Gln Asn Gln Asn Phe Asn Cys Ala Thr Ile Gly Leu Thr Lys Thr Phe
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<210> 86

<211> 187

<212> PRT

<213> Homo sapiens

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 Val Gln Asn Val Ser Gln Ile Phe Gly Arg Asn Asp Glu Ser Thr Met
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 Pro Thr Arg Ser Tyr Gly Thr Val Cys Pro Arg Asn Trp Asp Phe His
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 Gln Gly Lys Cys Phe Phe Phe Ser Phe Ser Glu Ser Pro Trp Lys Asp
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 Thr Pro Glu Lys Leu Lys Tyr Leu Gln Asp Ile Ala Gly Ile Glu Asn
 115 120 125
 Tyr Phe Ile Gly Leu Val Arg Gln Pro Gly Glu Lys Lys Trp Arg Trp
 130 135 140
 Ile Asn Asn Ser Val Phe Asn Gly Asn Val Thr Asn Gln Asp Gln Asn
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 Phe Asp Cys Val Thr Ile Gly Leu Thr Lys Thr Tyr Asp Ala Ala Ser
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<400> 89

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<210> 90

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<211> 4018

<212> DNA

<213> Homo sapiens

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<212> DNA
<213> Homo sapiens

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<210> 93
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<212> PRT
<213> Homo sapiens

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Val Val Gly Met Thr Leu Phe Leu Leu Tyr Phe Pro Gln Ile Phe Asn
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Lys Ser Asn Asp Gly Phe Thr Thr Thr Arg Ser Tyr Gly Thr Val Ser
35 40 45

Gln Ile Phe Gly Ser Ser Ser Pro Ser Pro Asn Gly Phe Ile Thr Thr
50 55 60

Arg Ser Tyr Gly Thr Val Cys Pro Lys Asp Trp Glu Phe Tyr Gln Ala
65 70 75 80

Arg Cys Phe Phe Leu Ser Thr Ser Glu Ser Ser Trp Asn Glu Ser Arg
85 90 95

Asp Phe Cys Lys Gly Lys Gly Ser Thr Leu Ala Ile Val Asn Thr Pro
100 105 110

Glu Lys Leu Lys Phe Leu Gln Asp Ile Thr Asp Ala Glu Lys Tyr Phe
115 120 125

Ile Gly Leu Ile Tyr His Arg Glu Glu Lys Arg Trp Arg Trp Ile Asn
130 135 140

Asn Ser Val Phe Asn Gly Lys Tyr Val Asn Met Pro Gln Phe Pro Gly
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<210> 94

<211> 21

<212> PRT

<213> Homo sapiens

<400> 94

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Phe Leu Leu Tyr Phe
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<210> 95

<211> 151
 <212> PRT
 <213> Homo sapiens

<400> 95

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 35 40 45

Glu Phe Tyr Gln Ala Arg Cys Phe Phe Leu Ser Thr Ser Glu Ser Ser
 50 55 60

Trp Asn Glu Ser Arg Asp Phe Cys Lys Gly Lys Gly Ser Thr Leu Ala
 65 70 75 80

Ile Val Asn Thr Pro Glu Lys Leu Lys Phe Leu Gln Asp Ile Thr Asp
 85 90 95

Ala Glu Lys Tyr Phe Ile Gly Leu Ile Tyr His Arg Glu Glu Lys Arg
 100 105 110

Trp Arg Trp Ile Asn Asn Ser Val Phe Asn Gly Lys Tyr Val Asn Met
 115 120 125

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Ile Ala Gly Phe Thr Leu Glu
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<210> 96
 <211> 3985
 <212> DNA
 <213> Homo sapiens

<400> 96

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Cys Lys Gly Lys Gly Ser Thr Leu Ala Ile Val Asn Thr Pro Glu Lys

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Leu Lys Phe Leu Gln Asp Ile Thr Asp Ala Glu Lys Tyr Phe Ile Gly

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<210> 107
 <211> 435
 <212> DNA
 <213> Homo sapiens

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tccacattgg caattgtcaa cacgccagag aaactgaagt ttcttcagga cataactgat 240
gctgagaagt attttatttg cttaatttac catcgtgaag agaaaagggt gcgttggatc 300
aacaactctg tgttcaatgg caatgttacc aatcagaatc agaatttcaa ctgtgcgacc 360
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gagaagaatg ccaaa 435

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<211> 145
<212> PRT
<213> Homo sapiens

<400> 108

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Val Val Gly Met Thr Leu Phe Leu Leu Tyr Phe Cys Pro Lys Asp Trp
20 25 30

Glu Phe Tyr Gln Ala Arg Cys Phe Phe Leu Ser Thr Ser Glu Ser Ser
35 40 45

Trp Asn Glu Ser Arg Asp Phe Cys Lys Gly Lys Gly Ser Thr Leu Ala
50 55 60

Ile Val Asn Thr Pro Glu Lys Leu Lys Phe Leu Gln Asp Ile Thr Asp
65 70 75 80

Ala Glu Lys Tyr Phe Ile Gly Leu Ile Tyr His Arg Glu Glu Lys Arg
85 90 95

Trp Arg Trp Ile Asn Asn Ser Val Phe Asn Gly Asn Val Thr Asn Gln
100 105 110

Asn Gln Asn Phe Asn Cys Ala Thr Ile Gly Leu Thr Lys Thr Phe Asp
115 120 125

Ala Ala Ser Cys Asp Ile Ser Tyr Arg Arg Ile Cys Glu Lys Asn Ala
130 135 140

Lys
145

<210> 109
<211> 22
<212> PRT
<213> Homo sapiens

<400> 109

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Phe Leu Leu Tyr Phe Cys
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<210> 110
 <211> 117
 <212> PRT
 <213> Homo sapiens

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 Ser Glu Ser Ser Trp Asn Glu Ser Arg Asp Phe Cys Lys Gly Lys Gly
 20 25 30
 Ser Thr Leu Ala Ile Val Asn Thr Pro Glu Lys Leu Lys Phe Leu Gln
 35 40 45
 Asp Ile Thr Asp Ala Glu Lys Tyr Phe Ile Gly Leu Ile Tyr His Arg
 50 55 60
 Glu Glu Lys Arg Trp Arg Trp Ile Asn Asn Ser Val Phe Asn Gly Asn
 65 70 75 80
 Val Thr Asn Gln Asn Gln Asn Phe Asn Cys Ala Thr Ile Gly Leu Thr
 85 90 95
 Lys Thr Phe Asp Ala Ala Ser Cys Asp Ile Ser Tyr Arg Arg Ile Cys
 100 105 110
 Glu Lys Asn Ala Lys
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 <212> DNA
 <213> Homo sapiens

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 <211> 405
 <212> DNA
 <213> Homo sapiens

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<210> 113
 <211> 135
 <212> PRT
 <213> Homo sapiens

<400> 113
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 Glu Phe Tyr Gln Ala Arg Cys Phe Phe Leu Ser Thr Ser Glu Ser Ser
 35 40 45
 Trp Asn Glu Ser Arg Asp Phe Cys Lys Gly Lys Gly Ser Thr Leu Ala
 50 55 60
 Ile Val Asn Thr Pro Glu Lys Leu Lys Phe Leu Gln Asp Ile Thr Asp
 65 70 75 80
 Ala Glu Lys Tyr Phe Ile Gly Leu Ile Tyr His Arg Glu Glu Lys Arg
 85 90 95

Trp Arg Trp Ile Asn Asn Ser Val Phe Asn Gly Lys Tyr Val Asn Met
 100 105 110

Pro Gln Phe Pro Gly Asp Leu Gly Leu Leu Gln Lys Thr Lys Pro Glu
 115 120 125

Ile Ala Gly Phe Thr Leu Glu
 130 135

<210> 114

<211> 22

<212> PRT

<213> Homo sapiens

<400> 114

Ile Ser Gly Leu Ile Val Val Val Leu Lys Val Val Gly Met Thr Leu
 1 5 10 15

Phe Leu Leu Tyr Phe Cys
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<210> 115

<211> 107

<212> PRT

<213> Homo sapiens

<400> 115

Pro Lys Asp Trp Glu Phe Tyr Gln Ala Arg Cys Phe Phe Leu Ser Thr
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Ser Glu Ser Ser Trp Asn Glu Ser Arg Asp Phe Cys Lys Gly Lys Gly
 20 25 30

Ser Thr Leu Ala Ile Val Asn Thr Pro Glu Lys Leu Lys Phe Leu Gln
 35 40 45

Asp Ile Thr Asp Ala Glu Lys Tyr Phe Ile Gly Leu Ile Tyr His Arg
 50 55 60

Glu Glu Lys Arg Trp Arg Trp Ile Asn Asn Ser Val Phe Asn Gly Lys
 65 70 75 80

Tyr Val Asn Met Pro Gln Phe Pro Gly Asp Leu Gly Leu Leu Gln Lys
 85 90 95

Thr Lys Pro Glu Ile Ala Gly Phe Thr Leu Glu

<210> 116

<400> 116

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<210> 117

<400> 117

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<210> 118

<400> 118

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<210> 121

<211> 1909

<212> DNA

<213> Homo sapiens

<400> 121

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<210> 122
 <211> 645
 <212> DNA
 <213> Homo sapiens

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<400> 122
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tgatgaatt gcgtgaggca ggctaacatc aggatgcagt gcaaaatcta tgattccctg 180
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aatgagaagg tgaaggctca cattctgctg acggctggaa tcatcttcat catcacgggc 360
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acggcactgg tgctgattgt tggaggagct ctgttctgct gcgttttttg ttgcaacgaa 540
aagagcagta gctacagata ctcgatacct tcccatcgca caacccaaaa aagttatcac 600
accggaagaa agtcaccgag cgtctactcc agaagtcagt atgtg 645

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<210> 123
 <211> 215
 <212> PRT
 <213> Homo sapiens

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<400> 123
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Phe Glu Asn Phe Trp Glu Gly Leu Trp Met Asn Cys Val Arg Gln Ala
35 40 45

Asn Ile Arg Met Gln Cys Lys Ile Tyr Asp Ser Leu Leu Ala Leu Ser
50 55 60

Pro Asp Leu Gln Ala Ala Arg Gly Leu Met Cys Ala Ala Ser Val Met
65 70 75 80

Ser Phe Leu Ala Phe Met Met Ala Ile Leu Gly Met Lys Cys Thr Arg
85 90 95

Cys Thr Gly Asp Asn Glu Lys Val Lys Ala His Ile Leu Leu Thr Ala
100 105 110

Gly Ile Ile Phe Ile Ile Thr Gly Met Val Val Leu Ile Pro Val Ser
115 120 125

Trp Val Ala Asn Ala Ile Ile Arg Asp Phe Tyr Asn Ser Ile Val Asn
130 135 140

Val Ala Gln Lys Arg Glu Leu Gly Glu Ala Leu Tyr Leu Gly Trp Thr
145 150 155 160

Thr Ala Leu Val Leu Ile Val Gly Gly Ala Leu Phe Cys Cys Val Phe
165 170 175

Cys Cys Asn Glu Lys Ser Ser Ser Tyr Arg Tyr Ser Ile Pro Ser His
180 185 190

Arg Thr Thr Gln Lys Ser Tyr His Thr Gly Lys Lys Ser Pro Ser Val
195 200 205

Tyr Ser Arg Ser Gln Tyr Val
210 215

<210> 124
<211> 24
<212> PRT
<213> Homo sapiens

<400> 124
Leu Phe Leu Gly Gly Val Gly Met Val Gly Thr Val Ala Val Thr Val
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Met Pro Gln Trp Arg Val Ser Ala
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<210> 125

<211> 47

<212> PRT

<213> Homo sapiens

<400> 125

Phe Ile Glu Asn Asn Ile Val Val Phe Glu Asn Phe Trp Glu Gly Leu
1 5 10 15

Trp Met Asn Cys Val Arg Gln Ala Asn Ile Arg Met Gln Cys Lys Ile
20 25 30

Tyr Asp Ser Leu Leu Ala Leu Ser Pro Asp Leu Gln Ala Ala Arg
35 40 45

<210> 126

<211> 21

<212> PRT

<213> Homo sapiens

<400> 126

Gly Leu Met Cys Ala Ala Ser Val Met Ser Phe Leu Ala Phe Met Met
1 5 10 15

Ala Ile Leu Gly Met
20

<210> 127

<211> 15

<212> PRT

<213> Homo sapiens

<400> 127

Lys Cys Thr Arg Cys Thr Gly Asp Asn Glu Lys Val Lys Ala His
1 5 10 15

<210> 128

<211> 24

<212> PRT

<213> Homo sapiens

<400> 128

Ile Leu Leu Thr Ala Gly Ile Ile Phe Ile Ile Thr Gly Met Val Val
1 5 10 15

Leu Ile Pro Val Ser Trp Val Ala
20

<210> 129

<211> 22

<212> PRT

<213> Homo sapiens

<400> 129

Asn Ala Ile Ile Arg Asp Phe Tyr Asn Ser Ile Val Asn Val Ala Gln
1 5 10 15

Lys Arg Glu Leu Gly Glu
20

<210> 130

<211> 25

<212> PRT

<213> Homo sapiens

<400> 130

Ala Leu Tyr Leu Gly Trp Thr Thr Ala Leu Val Leu Ile Val Gly Gly
1 5 10 15

Ala Leu Phe Cys Cys Val Phe Cys Cys
20 25

<210> 131

<211> 37

<212> PRT

<213> Homo sapiens

<400> 131

Asn Glu Lys Ser Ser Ser Tyr Arg Tyr Ser Ile Pro Ser His Arg Thr
1 5 10 15

Thr Gln Lys Ser Tyr His Thr Gly Lys Lys Ser Pro Ser Val Tyr Ser
20 25 30

Arg Ser Gln Tyr Val

<210> 132

<211> 225

<212> PRT

<213> Mus sp.

<400> 132

Met Ala Thr Tyr Ala Leu Gln Met Ala Ala Leu Val Leu Gly Gly Val
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Gly Met Val Gly Thr Val Ala Val Thr Ile Met Pro Gln Trp Arg Val
 20 25 30

Ser Ala Phe Ile Glu Ser Asn Ile Val Val Phe Glu Asn Arg Trp Glu
 35 40 45

Gly Leu Trp Met Asn Cys Met Arg His Ala Asn Ile Arg Met Gln Cys
 50 55 60

Lys Val Tyr Asp Ser Leu Leu Ala Leu Ser Pro Asp Leu Gln Ala Ser
 65 70 75 80

Arg Gly Leu Met Cys Ala Ala Ser Val Leu Ala Phe Leu Ala Phe Met
 85 90 95

Thr Ala Ile Leu Gly Met Lys Cys Thr Arg Cys Thr Gly Asp Asp Glu
 100 105 110

Asn Val Lys Ser Arg Ile Leu Leu Thr Ala Gly Ile Ile Phe Phe Ile
 115 120 125

Thr Gly Leu Val Val Leu Ile Pro Val Ser Trp Val Ala Asn Ser Ile
 130 135 140

Ile Arg Asp Phe Tyr Asn Pro Leu Val Asp Val Ala Leu Lys Arg Glu
 145 150 155 160

Leu Gly Glu Ala Leu Tyr Ile Gly Trp Thr Thr Ala Leu Val Leu Ile
 165 170 175

Ala Gly Gly Ala Leu Phe Cys Cys Val Phe Cys Cys Thr Glu Arg Ser
 180 185 190

Asn Ser Tyr Arg Tyr Ser Val Pro Ser His Arg Thr Thr Gln Arg Ser
 195 200 205

Ala Ala Gly Gly Thr Cys Thr Ala Cys Gly Ala Cys Thr Cys Cys Cys
 195 200 205
 Thr Gly Cys Thr Gly Gly Cys Thr Cys Thr Thr Ala Gly Thr Cys Cys
 210 215 220
 Ala Gly Ala Cys Cys Thr Cys Cys Ala Gly Gly Cys Ala Thr Cys Cys
 225 230 235 240
 Cys Gly Ala Gly Gly Ala Cys Thr Gly Ala Thr Gly Thr Gly Thr Gly
 245 250 255
 Cys Thr Gly Cys Gly Thr Cys Cys Gly Thr Cys Thr Thr Gly Gly Cys
 260 265 270
 Thr Thr Thr Cys Thr Thr Gly Gly Cys Thr Thr Thr Cys Ala Thr Gly
 275 280 285
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 290 295 300
 Thr Gly Ala Ala Gly Thr Gly Cys Ala Cys Cys Ala Gly Ala Thr Gly
 305 310 315 320
 Cys Ala Cys Gly Gly Gly Gly Gly Ala Cys Gly Ala Thr Gly Ala Gly
 325 330 335
 Ala Ala Cys Gly Thr Gly Ala Ala Gly Ala Gly Cys Cys Gly Cys Ala
 340 345 350
 Thr Cys Thr Thr Gly Cys Thr Gly Ala Cys Ala Gly Cys Cys Gly Gly
 355 360 365
 Ala Ala Thr Cys Ala Thr Cys Thr Thr Cys Thr Thr Cys Ala Thr Cys
 370 375 380
 Ala Cys Cys Gly Gly Cys Thr Thr Gly Gly Thr Thr Gly Thr Gly Cys
 385 390 395 400
 Thr Cys Ala Thr Cys Cys Cys Thr Gly Thr Cys Ala Gly Cys Thr Gly
 405 410 415
 Gly Gly Thr Thr Gly Cys Cys Ala Ala Thr Thr Cys Cys Ala Thr Cys
 420 425 430
 Ala Thr Cys Ala Gly Ala Gly Ala Cys Thr Thr Cys Thr Ala Cys Ala
 435 440 445

495

Ala Thr Cys Ala Ala Thr Ala Thr Ala Ala Ala Thr Ala Ala Ala Ala

740	745	750
Gly Ala Gly Cys Ala Gly Ala Ala Ala Ala Thr Ala Thr Gly Thr		
755	760	765
Cys Thr Thr Gly Gly Thr Thr Thr Thr Cys Ala Thr Thr Thr Gly Cys		
770	775	780
Thr Thr Ala Cys Cys Ala Ala Ala Ala Ala Ala Cys Ala Ala Cys		
785	790	795 800
Ala Ala Cys Ala Ala Ala Ala Ala Ala Ala Gly Thr Thr Gly Thr Cys		
	805	810 815
Cys Thr Thr Thr Gly Ala Gly Ala Ala Cys Thr Thr Cys Ala Cys Cys		
	820	825 830
Thr Gly Cys Thr Cys Cys Thr Ala Thr Gly Thr Gly Gly Gly Thr Ala		
	835	840 845
Cys Cys Thr Gly Ala Gly Thr Cys Ala Ala Ala Ala Thr Thr Gly Thr		
	850	855 860
Cys Ala Thr Thr Thr Thr Thr Gly Thr Thr Cys Thr Gly Thr Gly Ala		
	865	870 875 880
Ala Ala Ala Ala Thr Ala Ala Ala Thr Thr Thr Cys Cys Thr Thr Cys		
	885	890 895
Thr Thr Gly Thr Ala Cys Cys Ala Thr Thr Thr Cys Thr Gly Thr Thr		
	900	905 910
Thr Ala Gly Thr Thr Thr Thr Ala Cys Thr Ala Ala Ala Ala Thr Cys		
	915	920 925
Thr Gly Thr Ala Ala Ala Thr Ala Cys Thr Gly Thr Ala Thr Thr Thr		
	930	935 940
Thr Thr Cys Thr Gly Thr Thr Thr Ala Thr Thr Cys Cys Ala Ala Ala		
	945	950 955 960
Thr Thr Thr Gly Ala Thr Gly Ala Ala Ala Cys Thr Gly Ala Cys Ala		
	965	970 975
Ala Thr Cys Cys Ala Ala Thr Thr Thr Gly Ala Ala Ala Gly Thr Thr		
	980	985 990
Thr Gly Thr Gly Thr Cys Gly Ala Cys Gly Thr Cys Thr Gly Thr Cys		

995	1000	1005
Thr Ala Gly Cys Thr Thr Ala Ala Ala Thr Gly Ala Ala Thr Gly Thr		
1010	1015	1020
Gly Thr Thr Cys Thr Ala Thr Thr Thr Gly Cys Thr Thr Thr Ala Thr		
1025	1030	1035 1040
Ala Cys Ala Thr Thr Thr Ala Thr Ala Thr Thr Ala Ala Thr Ala Ala		
	1045	1050 1055
Ala Thr Thr Gly Thr Ala Cys Ala Thr Thr Thr Thr Thr Cys Cys Ala		
	1060	1065 1070
Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala		
	1075	1080 1085
Ala Ala		
1090		
<210> 135		
<211> 209		
<212> PRT		
<213> Homo sapiens		
<400> 135		
Met Ala Ser Met Gly Leu Gln Val Met Gly Ile Ala Leu Ala Val Leu		
1	5	10 15
Gly Trp Leu Ala Val Met Leu Cys Cys Ala Leu Pro Met Trp Arg Val		
	20	25 30
Thr Ala Phe Ile Gly Ser Asn Ile Val Thr Ser Gln Thr Ile Trp Glu		
	35	40 45
Gly Leu Trp Met Asn Cys Val Val Gln Ser Thr Gly Gln Met Gln Cys		
	50	55 60
Lys Val Tyr Asp Ser Leu Leu Ala Leu Pro Gln Asp Leu Gln Ala Ala		
	65	70 75 80
Arg Ala Leu Val Ile Ile Ser Ile Ile Val Ala Ala Leu Gly Val Leu		
	85	90 95
Leu Ser Val Val Gly Gly Lys Cys Thr Asn Cys Leu Glu Asp Glu Ser		
	100	105 110

Ala Lys Ala Lys Thr Met Ile Val Ala Gly Val Val Phe Leu Leu Ala
 115 120 125

Gly Leu Met Val Ile Val Pro Val Ser Trp Thr Ala His Asn Ile Ile
 130 135 140

Gln Asp Phe Tyr Asn Pro Leu Val Ala Ser Gly Gln Lys Arg Glu Met
 145 150 155 160

Gly Ala Ser Leu Tyr Val Gly Trp Ala Ala Ser Gly Leu Leu Leu Leu
 165 170 175

Gly Gly Gly Leu Leu Cys Cys Asn Cys Pro Pro Arg Thr Asp Lys Pro
 180 185 190

Tyr Ser Ala Lys Tyr Ser Ala Ala Arg Ser Ala Ala Ala Ser Asn Tyr
 195 200 205

Val

<210> 136

<211> 210

<212> PRT

<213> Mus sp.

<400> 136

Met Ala Ser Met Gly Leu Gln Val Leu Gly Ile Ser Leu Ala Val Leu
 1 5 10 15

Gly Trp Leu Gly Ile Ile Leu Ser Cys Ala Leu Pro Met Trp Arg Val
 20 25 30

Thr Ala Phe Ile Gly Ser Asn Ile Val Thr Ala Gln Thr Ser Trp Glu
 35 40 45

Gly Leu Trp Met Asn Cys Val Val Gln Ser Thr Gly Gln Met Gln Cys
 50 55 60

Lys Met Tyr Asp Ser Met Leu Ala Leu Pro Gln Asp Leu Gln Ala Ala
 65 70 75 80

Arg Ala Leu Met Val Ile Ser Ile Ile Val Gly Ala Leu Gly Met Leu
 85 90 95

Leu Ser Val Val Gly Gly Lys Cys Thr Asn Cys Met Glu Asp Glu Thr
 100 105 110

100	105	110
Ala Lys Ile Thr Ile Val	Ala Gly Val Leu Phe Leu Leu Ala Ala Val	
115	120	125
Leu Thr Leu Val Pro Val Ser Trp Ser Ala Asn Thr Ile Ile Arg Asp		
130	135	140
Phe Tyr Asn Pro Leu Val Pro Glu Ala Gln Lys Arg Glu Met Gly Thr		
145	150	155
		160
Gly Leu Tyr Val Gly Trp Ala Ala Ala Ala Leu Gln Leu Leu Gly Gly		
165	170	175
Ala Leu Leu Cys Cys Ser Cys Pro Pro Arg Glu Lys Tyr Ala Pro Thr		
180	185	190
Lys Ile Leu Tyr Ser Ala Pro Arg Ser Thr Gly Pro Gly Thr Gly Thr		
195	200	205
Gly Thr Ala Tyr Asp Arg Lys Thr Thr Ser Glu Arg Pro Gly Ala Arg		
210	215	220
Thr Pro His His His His Tyr Gln Pro Ser Met Tyr Pro Thr Arg Pro		
225	230	235
		240
Ala Cys Ser Leu Ala Ser Glu Thr		
245		
<210> 138		
<211> 191		
<212> PRT		
<213> Homo sapiens		
<400> 138		
Phe Ile Glu Asn Asn Ile Val Val Phe Glu Asn Phe Trp Glu Gly Leu		
1	5	10
		15
Trp Met Asn Cys Val Arg Gln Ala Asn Ile Arg Met Gln Cys Lys Ile		
20	25	30
Tyr Asp Ser Leu Leu Ala Leu Ser Pro Asp Leu Gln Ala Ala Arg Gly		
35	40	45
Leu Met Cys Ala Ala Ser Val Met Ser Phe Leu Ala Phe Met Met Ala		
50	55	60

Ile Leu Gly Met Lys Cys Thr Arg Cys Thr Gly Asp Asn Glu Lys Val
65 70 75 80

Lys Ala His Ile Leu Leu Thr Ala Gly Ile Ile Phe Ile Ile Thr Gly
85 90 95

Met Val Val Leu Ile Pro Val Ser Trp Val Ala Asn Ala Ile Ile Arg
100 105 110

Asp Phe Tyr Asn Ser Ile Val Asn Val Ala Gln Lys Arg Glu Leu Gly
115 120 125

Glu Ala Leu Tyr Leu Gly Trp Thr Thr Ala Leu Val Leu Ile Val Gly
130 135 140

Gly Ala Leu Phe Cys Cys Val Phe Cys Cys Asn Glu Lys Ser Ser Ser
145 150 155 160

Tyr Arg Tyr Ser Ile Pro Ser His Arg Thr Thr Gln Lys Ser Tyr His
165 170 175

Thr Gly Lys Lys Ser Pro Ser Val Tyr Ser Arg Ser Gln Tyr Val
180 185 190

<210> 139
<400> 139
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<210> 140
<400> 140
000

<210> 141
<211> 323
<212> DNA
<213> Homo sapiens

<400> 141
cgagcgccg cccgggcagg tcagacatgg gccaaaggagc cagaggccgt ccgggggtctg 60
tgagttgagc ttgaggccgc aggatgaggg tcatcatggg gatagccagc ctgggggttcc 120
tctgggcagt attcctgctt cctcttgtgt ttgggggtccc cacagaggag actacctttg 180
gagaatctgt ggctcccat ctccccaag gctgtcgacg atgctgtgac cccgaggacc 240
tgatgtcctc tgatgatacg gtccaggccc ctgtttcccc ttatgtcctg cctgaagtca 300
ggccgtacct cggccgcgac cac 323

<210> 142
 <211> 240
 <212> DNA
 <213> Homo sapiens

<400> 142
 atgaggggtca tcatgggggat agccagcctg gggttcctct gggcagtatt cctgcttcct 60
 cttgtgtttg ggtcccccac agaggagact accttgagg aatctgtggc ctcccatctc 120
 cccaaaggct gtcgacgatg ctgtgacccc gaggacctga tgtcctctga tgatacggtc 180
 caggcccctg tttcccctta tgtcctgcct gaagtcaggc cgtacctcg cgcgaccac 240

<210> 143
 <211> 80
 <212> PRT
 <213> Homo sapiens

<400> 143
 Met Arg Val Ile Met Gly Ile Ala Ser Leu Gly Phe Leu Trp Ala Val
 1 5 10 15
 Phe Leu Leu Pro Leu Val Phe Gly Val Pro Thr Glu Glu Thr Thr Phe
 20 25 30
 Gly Glu Ser Val Ala Ser His Leu Pro Lys Gly Cys Arg Arg Cys Cys
 35 40 45
 Asp Pro Glu Asp Leu Met Ser Ser Asp Asp Thr Val Gln Ala Pro Val
 50 55 60
 Ser Pro Tyr Val Leu Pro Glu Val Arg Pro Tyr Leu Gly Arg Asp His
 65 70 75 80

<210> 144
 <211> 24
 <212> PRT
 <213> Homo sapiens

<400> 144
 Met Arg Val Ile Met Gly Ile Ala Ser Leu Gly Phe Leu Trp Ala Val
 1 5 10 15
 Phe Leu Leu Pro Leu Val Phe Gly

<210> 145
 <211> 56
 <212> PRT
 <213> Homo sapiens

<400> 145
 Val Pro Thr Glu Glu Thr Thr Phe Gly Glu Ser Val Ala Ser His Leu
 1 5 10 15
 Pro Lys Gly Cys Arg Arg Cys Cys Asp Pro Glu Asp Leu Met Ser Ser
 20 25 30
 Asp Asp Thr Val Gln Ala Pro Val Ser Pro Tyr Val Leu Pro Glu Val
 35 40 45
 Arg Pro Tyr Leu Gly Arg Asp His
 50 55

<210> 146
 <400> 146
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<210> 147
 <400> 147
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<210> 148
 <400> 148
 000

<210> 149
 <400> 149
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<210> 150
 <400> 150
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<210> 151

<211> 546
 <212> DNA
 <213> Homo sapiens

<400> 151
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 taaaaacaac acccagtttt gtacttgat aagtatggaa ttcttatata ggattgttgt 120
 tggattcatt cttatcttta ctttttttaa tattaaggga cagaatacca agtgtccaat 180
 gtcttggttat tatattgtta gggactggg cactttggg atattgactg tattctgggt 240
 ttgccccctc actattttta atccagacta ttttatacct atcagtataa ctatagttct 300
 tactcttctt cttggaattc tttttcttat tgtttattat gggagttttc acccaaacag 360
 aagtgcagaa acaaaatgtg atgaaattga tggaaaacca gttctaagag aatgtagaat 420
 gagatatttc ctaatggaat aagctattca tttatgatat atattttctt atattttgtt 480
 tcattgggta gtaaagaaaa tgtgtgttaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 540
 aaaaaa 546

<210> 152
 <211> 345
 <212> DNA
 <213> Homo sapiens

<400> 152
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 aagggacaga ataccaagtg tccaatgtct tgttattata ttgtagggt actgggcact 120
 ttggggatat tgactgtatt ctgggtttgc ccctcacta tttttaatcc agactatatt 180
 atacctatca gtataactat agttcttact cttcttcttg gaattctttt tcttattgtt 240
 tattatggga gttttcaccc aaacagaagt gcagaaacaa aatgtgatga aattgatgga 300
 aaaccagttc taagagaatg tagaatgaga ttttcctaa tggaa 345

<210> 153
 <211> 115
 <212> PRT
 <213> Homo sapiens

<400> 153
 Met Glu Phe Leu Tyr Arg Ile Val Val Gly Phe Ile Leu Ile Phe Thr
 1 5 10 15
 Phe Phe Asn Ile Lys Gly Gln Asn Thr Lys Cys Pro Met Ser Cys Tyr
 20 25 30
 Tyr Ile Val Arg Val Leu Gly Thr Leu Gly Ile Leu Thr Val Phe Trp
 35 40 45
 Val Cys Pro Leu Thr Ile Phe Asn Pro Asp Tyr Phe Ile Pro Ile Ser
 50 55 60

Ile Thr Ile Val Leu Thr Leu Leu Leu Gly Ile Leu Phe Leu Ile Val
65 70 75 80

Tyr Tyr Gly Ser Phe His Pro Asn Arg Ser Ala Glu Thr Lys Cys Asp
85 90 95

Glu Ile Asp Gly Lys Pro Val Leu Arg Glu Cys Arg Met Arg Tyr Phe
100 105 110

Leu Met Glu
115

<210> 154
<211> 22
<212> PRT
<213> Homo sapiens

<400> 154
Met Glu Phe Leu Tyr Arg Ile Val Val Gly Phe Ile Leu Ile Phe Thr
1 5 10 15

Phe Phe Asn Ile Lys Gly
20

<210> 155
<211> 93
<212> PRT
<213> Homo sapiens

<400> 155
Gln Asn Thr Lys Cys Pro Met Ser Cys Tyr Tyr Ile Val Arg Val Leu
1 5 10 15

Gly Thr Leu Gly Ile Leu Thr Val Phe Trp Val Cys Pro Leu Thr Ile
20 25 30

Phe Asn Pro Asp Tyr Phe Ile Pro Ile Ser Ile Thr Ile Val Leu Thr
35 40 45

Leu Leu Leu Gly Ile Leu Phe Leu Ile Val Tyr Tyr Gly Ser Phe His
50 55 60

Pro Asn Arg Ser Ala Glu Thr Lys Cys Asp Glu Ile Asp Gly Lys Pro
65 70 75 80

Val Leu Arg Glu Cys Arg Met Arg Tyr Phe Leu Met Glu
85 90

<210> 156
<211> 9
<212> PRT
<213> Homo sapiens

<400> 156
Gln Asn Thr Lys Cys Pro Met Ser Cys
1 5

<210> 157
<211> 18
<212> PRT
<213> Homo sapiens

<400> 157
Tyr Tyr Ile Val Arg Val Leu Gly Thr Leu Gly Ile Leu Thr Val Phe
1 5 10 15

Trp Val

<210> 158
<211> 9
<212> PRT
<213> Homo sapiens

<400> 158
Cys Pro Leu Thr Ile Phe Asn Pro Asp
1 5

<210> 159
<211> 24
<212> PRT
<213> Homo sapiens

<400> 159
Tyr Phe Ile Pro Ile Ser Ile Thr Ile Val Leu Thr Leu Leu Leu Gly
1 5 10 15

Ile Leu Phe Leu Ile Val Tyr Tyr
20

[illegible]

$\langle 210 \rangle$ 161
 $\langle 400 \rangle$ 161
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<210> 163
<400> 163
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<210> 165
<400> 165
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<210> 167
<400> 167
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<210> 168
<400> 168
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<210> 169
<400> 169
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<210> 170
<400> 170
000

<210> 171
<211> 1684
<212> DNA
<213> Homo sapiens

<400> 171

cggacgcggt gggcggacgc gtgggcagct gaagaaagag aggaatgaag cgccttctgc 60
ttctgttttt gttctttata acattttctt ctgcatttcc cttagtccgg atgacggaaa 120
atgaagaaaa tatgcaactg gctcaggcat atctcaacca gttctactct cttgaaatag 180
aagggaatca tcttgttcaa agcaagaata ggagtctcat agatgacaaa attcgggaaa 240
tgcaagcatt ttttggtattg acagtgactg gaaaactgga ctcaaacacc cttgagatca 300
tgaagacacc caggtgtggg gtgcctgatg tgggccagta tggctacacc ctccctgggt 360
ggagaaaata caacctcacc tacagaataa taaactatac tccggatatg gcacgagctg 420
ctgtggatga ggctatccaa gaaggtttag aagtgtggag caaagtcact ccaactaaaat 480
tcaccaagat ttcaaagggg attgcagaca tcatgattgc ctttaggact cgagtccatg 540
gtcgggtgtcc tcgctatttt gatggtcctt tgggagtgtc tggccatgcc ttctctctctg 600
gtccgggtct ggggtgtgac actcattttg atgaggatga aaactggacc aaggatggag 660
caggattcaa cttgtttctt gtggctgctc atgaatttgg tcatgcactg gggctctctc 720
actccaatga tcaaacagcc ttgatgttcc caaattatgt ctccctggat cccagaaaaat 780
accacttttc tcaggatgat atcaatggaa tccagtccat ctatggaggt ctgcctaagg 840
tacctgctaa gccaaaggaa ccactatac cccatgcctg tgaccctgac ttgacttttg 900
acgctatcac aactttccgc agagaagtaa tgttctttaa aggcaggcac ctatggagga 960
tctattatga tatcacgat gttgagtttg aattaattgc ttcattcttg ccatctctgc 1020
cagctgatct gcaagctgca tacgagaacc ccagagataa gattctgggt tttaaagatg 1080
aaaacttctg gatgatcaga ggatatgctg tcttgccaga ttatcccaa tccatccata 1140
cattaggttt tccaggacgt gtgaagaaaa tagatgcagc cgtctgtgat aagaccacaa 1200
gaaaaaccta cttctttgtg ggcattttgt gctggaggtt tgatgaaatg acccaaacca 1260
tggacaaagg attccgcag agagtgttaa aacactttcc tggaatcagt atccgtgttg 1320

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atgctgcttt ccagtacaaa ggattcttct ttttcagccg tggatcaaag caatttgaat 1380
acaacattaa gacaaagaat attacccgaa tcatgagaac taatacttgg tttcaatgca 1440
aagaacccaaa gaactcctca tttggttttg atatcaacaa ggaaaaagca cattcaggag 1500
gcataaagat attgtatcat aagagtttaa gcttgtttat ttttggattt gttcatttgc 1560
tgaaaaacac ttctatttat caataaattc atagacctaa aataaacctc aacaggtctt 1620
ttaatataaa ttctgcttca aaatagaata aaaccattct ttaacaacaa aaaaaaaaaa 1680
aaaa                                              1684

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<210> 172
<211> 1542
<212> DNA
<213> Homo sapiens

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<400> 172
atgaagcgcc ttctgcttct gtttttgttc tttataacat tttcttctgc atttccctta 60
gtccggatga cggaaaatga agaaaatatg caactggctc aggcatactc caaccagttc 120
tactctcttg aaatagaagg gaatcatctt gttcaaagca agaataggag tctcatagat 180
gacaaaattc gggaaatgca agcatttttt ggattgacag tgactggaaa actggactca 240
aacacccttg agatcatgaa gacaccacag tgtgggggtgc ctgatgtggg ccagtatggc 300
tacaccctcc ctgggtggag aaaatacaac ctcacctaca gaataataaa ctatactccg 360
gatatggcac gagctgctgt ggatgaggct atccaagaag gtttagaagt gtggagcaaa 420
gtcactccac taaaattcac caagatttca aaggggattg cagacatcat gattgccttt 480
aggactcgag tccatggctg gtgtcctcgc tattttgatg gtcccttggg agtgcttggc 540
catgcctttc ctctggtcc gggctctgggt ggtgacactc attttgatga ggatgaaaac 600
tggaccaagg atggagcagg attcaacttg tttcttgtgg ctgctcatga atttggtcac 660
gcactggggc tctctcactc caatgatcaa acagccttga tgttcccaaa ttatgtctcc 720
ctggatccca gaaaataccc acttttctcag gatgatatca atggaatoca gtccatctat 780
ggaggtctgc ctaaggtaac tgctaagcca aaggaacca ctatacccca tgcctgtgac 840
cctgacttga cttttgacgc tatcacaact ttccgcagag aagtaatgtt ctttaaaggc 900
aggcacctat ggaggatcta ttatgatatc acggatgttg agtttgaatt aattgcttca 960
ttctggccat ctctgccagc tgatctgcaa gctgcatacg agaaccocag agataagatt 1020
ctggttttta aagatgaaaa cttctggatg atcagaggat atgctgtctt gccagattat 1080
cccaaattca tccatacatt aggtttttcca ggacgtgtga agaaaataga tgcagccgtc 1140
tgtgataaga ccacaagaaa aacctacttc tttgtgggca tttgggtgctg gaggtttgat 1200
gaaatgacct aaaccatgga caaaggattc ccgcagagag tggtaaaaca ctttcctgga 1260
atcagtatcc gtgttgatgc tgcctttccag taaaaggat tcttcttttt cagccgtgga 1320
tcaaagcaat ttgaatacaa cattaagaca aagaatatta cccgaatcat gagaactaat 1380
acttggtttc aatgcaaaga accaaagaac tcctcatttg gttttgatat caacaaggaa 1440
aaagcacatt caggaggcat aaagatatgt tatcataaga gtttaagctt gtttattttt 1500
ggatttggtc atttgcgtgaa aaacacttct atttatcaat aa 1542

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<210> 173
<211> 513
<212> PRT
<213> Homo sapiens

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<400> 173

Met Lys Arg Leu Leu Leu Leu Phe Leu Phe Phe Ile Thr Phe Ser Ser
1 5 10 15

Ala Phe Pro Leu Val Arg Met Thr Glu Asn Glu Glu Asn Met Gln Leu
20 25 30

Ala Gln Ala Tyr Leu Asn Gln Phe Tyr Ser Leu Glu Ile Glu Gly Asn
35 40 45

His Leu Val Gln Ser Lys Asn Arg Ser Leu Ile Asp Asp Lys Ile Arg
50 55 60

Glu Met Gln Ala Phe Phe Gly Leu Thr Val Thr Gly Lys Leu Asp Ser
65 70 75 80

Asn Thr Leu Glu Ile Met Lys Thr Pro Arg Cys Gly Val Pro Asp Val
85 90 95

Gly Gln Tyr Gly Tyr Thr Leu Pro Gly Trp Arg Lys Tyr Asn Leu Thr
100 105 110

Tyr Arg Ile Ile Asn Tyr Thr Pro Asp Met Ala Arg Ala Ala Val Asp
115 120 125

Glu Ala Ile Gln Glu Gly Leu Glu Val Trp Ser Lys Val Thr Pro Leu
130 135 140

Lys Phe Thr Lys Ile Ser Lys Gly Ile Ala Asp Ile Met Ile Ala Phe
145 150 155 160

Arg Thr Arg Val His Gly Arg Cys Pro Arg Tyr Phe Asp Gly Pro Leu
165 170 175

Gly Val Leu Gly His Ala Phe Pro Pro Gly Pro Gly Leu Gly Gly Asp
180 185 190

Thr His Phe Asp Glu Asp Glu Asn Trp Thr Lys Asp Gly Ala Gly Phe
195 200 205

Asn Leu Phe Leu Val Ala Ala His Glu Phe Gly His Ala Leu Gly Leu
210 215 220

Ser His Ser Asn Asp Gln Thr Ala Leu Met Phe Pro Asn Tyr Val Ser
225 230 235 240

Leu Asp Pro Arg Lys Tyr Pro Leu Ser Gln Asp Asp Ile Asn Gly Ile
245 250 255

Gln	Ser	Ile	Tyr	Gly	Gly	Leu	Pro	Lys	Val	Pro	Ala	Lys	Pro	Lys	Glu	260	265	270
Pro	Thr	Ile	Pro	His	Ala	Cys	Asp	Pro	Asp	Leu	Thr	Phe	Asp	Ala	Ile	275	280	285
Thr	Thr	Phe	Arg	Arg	Glu	Val	Met	Phe	Phe	Lys	Gly	Arg	His	Leu	Trp	290	295	300
Arg	Ile	Tyr	Tyr	Asp	Ile	Thr	Asp	Val	Glu	Phe	Glu	Leu	Ile	Ala	Ser	305	310	315
Phe	Trp	Pro	Ser	Leu	Pro	Ala	Asp	Leu	Gln	Ala	Ala	Tyr	Glu	Asn	Pro	325	330	335
Arg	Asp	Lys	Ile	Leu	Val	Phe	Lys	Asp	Glu	Asn	Phe	Trp	Met	Ile	Arg	340	345	350
Gly	Tyr	Ala	Val	Leu	Pro	Asp	Tyr	Pro	Lys	Ser	Ile	His	Thr	Leu	Gly	355	360	365
Phe	Pro	Gly	Arg	Val	Lys	Lys	Ile	Asp	Ala	Ala	Val	Cys	Asp	Lys	Thr	370	375	380
Thr	Arg	Lys	Thr	Tyr	Phe	Phe	Val	Gly	Ile	Trp	Cys	Trp	Arg	Phe	Asp	385	390	395
Glu	Met	Thr	Gln	Thr	Met	Asp	Lys	Gly	Phe	Pro	Gln	Arg	Val	Val	Lys	405	410	415
His	Phe	Pro	Gly	Ile	Ser	Ile	Arg	Val	Asp	Ala	Ala	Phe	Gln	Tyr	Lys	420	425	430
Gly	Phe	Phe	Phe	Phe	Ser	Arg	Gly	Ser	Lys	Gln	Phe	Glu	Tyr	Asn	Ile	435	440	445
Lys	Thr	Lys	Asn	Ile	Thr	Arg	Ile	Met	Arg	Thr	Asn	Thr	Trp	Phe	Gln	450	455	460
Cys	Lys	Glu	Pro	Lys	Asn	Ser	Ser	Phe	Gly	Phe	Asp	Ile	Asn	Lys	Glu	465	470	475
Lys	Ala	His	Ser	Gly	Gly	Ile	Lys	Ile	Leu	Tyr	His	Lys	Ser	Leu	Ser	485	490	495
Leu	Phe	Ile	Phe	Gly	Ile	Val	His	Leu	Leu	Lys	Asn	Thr	Ser	Ile	Tyr	500	505	510

Gln

<210> 174

<211> 17

<212> PRT

<213> Homo sapiens

<400> 174

Met Lys Arg Leu Leu Leu Leu Phe Leu Phe Phe Ile Thr Phe Ser Ser
1 5 10 15

Ala

<210> 175

<211> 291

<212> PRT

<213> Homo sapiens

<400> 175

Phe Pro Leu Val Arg Met Thr Glu Asn Glu Glu Asn Met Gln Leu Ala
1 5 10 15

Gln Ala Tyr Leu Asn Gln Phe Tyr Ser Leu Glu Ile Glu Gly Asn His
20 25 30

Leu Val Gln Ser Lys Asn Arg Ser Leu Ile Asp Asp Lys Ile Arg Glu
35 40 45

Met Gln Ala Phe Phe Gly Leu Thr Val Thr Gly Lys Leu Asp Ser Asn
50 55 60

Thr Leu Glu Ile Met Lys Thr Pro Arg Cys Gly Val Pro Asp Val Gly
65 70 75 80

Gln Tyr Gly Tyr Thr Leu Pro Gly Trp Arg Lys Tyr Asn Leu Thr Tyr
85 90 95

Arg Ile Ile Asn Tyr Thr Pro Asp Met Ala Arg Ala Ala Val Asp Glu
100 105 110

Ala Ile Gln Glu Gly Leu Glu Val Trp Ser Lys Val Thr Pro Leu Lys
115 120 125

Phe Thr Lys Ile Ser Lys Gly Ile Ala Asp Ile Met Ile Ala Phe Arg
 130 135 140

Thr Arg Val His Gly Arg Cys Pro Arg Tyr Phe Asp Gly Pro Leu Gly
 145 150 155 160

Val Leu Gly His Ala Phe Pro Pro Gly Pro Gly Leu Gly Gly Asp Thr
 165 170 175

His Phe Asp Glu Asp Glu Asn Trp Thr Lys Asp Gly Ala Gly Phe Asn
 180 185 190

Leu Phe Leu Val Ala Ala His Glu Phe Gly His Ala Leu Gly Leu Ser
 195 200 205

His Ser Asn Asp Gln Thr Ala Leu Met Phe Pro Asn Tyr Val Ser Leu
 210 215 220

Asp Pro Arg Lys Tyr Pro Leu Ser Gln Asp Asp Ile Asn Gly Ile Gln
 225 230 235 240

Ser Ile Tyr Gly Gly Leu Pro Lys Val Pro Ala Lys Pro Lys Glu Pro
 245 250 255

Thr Ile Pro His Ala Cys Asp Pro Asp Leu Thr Phe Asp Ala Ile Thr
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Ile Tyr Tyr
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<210> 176

<211> 467

<212> PRT

<213> Homo sapiens

<400> 176

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 35 40 45

Arg Arg His Pro Gln Leu Gln Arg Val Glu Met Asn Phe Ile Ser Leu
305 310 315 320

Phe Trp Pro Ser Leu Pro Thr Gly Ile Gln Ala Ala Tyr Glu Asp Phe
325 330 335

Asp Arg Asp Leu Ile Phe Leu Phe Lys Gly Asn Gln Tyr Trp Ala Leu
340 345 350

Ser Gly Tyr Asp Ile Leu Gln Gly Tyr Pro Lys Asp Ile Ser Asn Tyr
355 360 365

Gly Phe Pro Ser Ser Val Gln Ala Ile Asp Ala Ala Val Phe Tyr Arg
370 375 380

Ser Lys Thr Tyr Phe Phe Val Asn Asp Gln Phe Trp Arg Tyr Asp Asn
385 390 395 400

Gln Arg Gln Phe Met Glu Pro Gly Tyr Pro Lys Ser Ile Ser Gly Ala
405 410 415

Phe Pro Gly Ile Glu Ser Lys Val Asp Ala Val Phe Gln Gln Glu His
420 425 430

Phe Phe His Val Phe Ser Gly Pro Arg Tyr Tyr Ala Phe Asp Leu Ile
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Arg Tyr Gly
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<400> 177

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Cys Thr Gly Thr Ala Thr Cys Thr Thr Cys Thr Ala Ala Ala Gly Ala		
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Gly Thr Thr Cys Ala Gly Gly Ala Cys Thr Ala Cys Cys Thr Gly Gly		
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Ala Ala Ala Ala Gly Thr Thr Cys Thr Ala Cys Cys Ala Ala Thr Thr		
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Ala Cys Cys Ala Ala Gly Cys Ala Ala Cys Cys Ala Gly Thr Ala Thr		
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Cys Ala Gly Thr Cys Thr Ala Cys Ala Ala Gly Gly Ala Ala Gly Ala		
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Ala Thr Gly Gly Cys Ala Cys Thr Ala Ala Thr Gly Thr Gly Ala Thr		
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Cys Gly Thr Thr Gly Ala Ala Ala Ala Gly Cys Thr Thr Ala Ala Ala		
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260	265	270
Thr Gly Gly Ala Gly Thr Gly Cys Cys Thr Gly Ala Cys Ala Gly Thr		
275	280	285
Gly Gly Thr Gly Gly Thr Thr Thr Thr Ala Thr Gly Thr Thr Ala Ala		

290	295	300
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Thr Thr Gly Ala Cys Cys Thr Ala Cys Ala Gly Gly Ala Thr Thr Cys		
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Gly Ala Ala Ala Cys Thr Ala Thr Ala Cys Cys Cys Cys Ala Cys Ala		
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Gly Cys Thr Gly Thr Cys Ala Gly Ala Gly Gly Cys Thr Gly Ala Gly		
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Cys Thr Gly Gly Ala Gly Thr Gly Thr Thr Gly Cys Ala Thr Cys Ala		
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Cys Cys Thr Cys Thr Cys Ala Thr Cys Thr Thr Cys Ala Cys Cys Ala		
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Thr Cys Cys Ala Thr Thr Thr Gly Ala Thr Gly Gly Ala Cys Cys Cys		
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 Gln Tyr Gly Tyr Thr Leu Pro Gly Trp Arg Lys Tyr Asn Leu Thr Tyr
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 Arg Ile Ile Asn Tyr Thr Pro Asp Met Ala Arg Ala Ala Val Asp Glu
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Phe Thr Lys Ile Ser Lys Gly Ile Ala Asp Ile Met Ile Ala Phe Arg
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Thr Arg Val His Gly Arg Cys Pro Arg Tyr Phe Asp Gly Pro Leu Gly
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Val Leu Gly His Ala Phe Pro Pro Gly Pro Gly Leu Gly Gly Asp Thr
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His Phe Asp Glu Asp Glu Asn Trp Thr Lys Asp Gly Ala Gly Phe Asn
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Leu Phe Leu Val Ala Ala His Glu Phe Gly His Ala Leu Gly Leu Ser
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His Ser Asn Asp Gln Thr Ala Leu Met Phe Pro Asn Tyr Val Ser Leu
210 215 220

Asp Pro Arg Lys Tyr Pro Leu Ser Gln Asp Asp Ile Asn Gly Ile Gln
225 230 235 240

Ser Ile Tyr Gly Gly Leu Pro Lys Val Pro Ala Lys Pro Lys Glu Pro
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Thr Ile Pro His Ala Cys Asp Pro Asp Leu Thr Phe Asp Ala Ile Thr
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Thr Phe Arg Arg Glu Val Met Phe Phe Lys Gly Arg His Leu Trp Arg
275 280 285

Ile Tyr Tyr Asp Ile Thr Asp Val Glu Phe Glu Leu Ile Ala Ser Phe
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Asp Lys Ile Leu Val Phe Lys Asp Glu Asn Phe Trp Met Ile Arg Gly
325 330 335

Tyr Ala Val Leu Pro Asp Tyr Pro Lys Ser Ile His Thr Leu Gly Phe
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Pro Gly Arg Val Lys Lys Ile Asp Ala Ala Val Cys Asp Lys Thr Thr
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Arg Lys Thr Tyr Phe Phe Val Gly Ile Trp Cys Trp Arg Phe Asp Glu
370 375 380

Met Thr Gln Thr Met Asp Lys Gly Phe Pro Gln Arg Val Val Lys His
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Phe Pro Gly Ile Ser Ile Arg Val Asp Ala Ala Phe Gln Tyr Lys Gly
 405 410 415

Phe Phe Phe Phe Ser Arg Gly Ser Lys Gln Phe Glu Tyr Asn Ile Lys
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Thr Lys Asn Ile Thr Arg Ile Met Arg Thr Asn Thr Trp Phe Gln Cys
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<211> 18

<212> PRT

<213> Homo sapiens

<400> 179

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<213> Homo sapiens

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Tyr Arg Ile Met Asn Tyr Thr Pro Asp Met Thr Pro Ala Asp Val Asp
 115 120 125

Glu Ala Ile Gln Lys Ala Leu Gln Val Trp Ser Lys Val Thr Pro Leu
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Thr Phe Thr Arg Ile Ser Lys Gly Val Ala Asp Ile Met Ile Ala Phe
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Arg Thr Gly Val His Gly Trp Cys Pro Arg His Phe Asp Gly Pro Leu
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Gly Val Leu Gly His Ala Phe Pro Pro Gly Leu Gly Leu Gly Gly Asp
 180 185 190

Thr His Phe Asp Glu Asp Glu Thr Trp Ile Ala Lys Asp Gly Glu Gly
 195 200 205

Phe Asn Leu Phe Leu Val Ala Ala His Glu Phe Gly His Ser Leu Gly
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Leu Ser His Ser Asn Asp Gln Thr Ala Leu Met Phe Pro Asn Tyr Ile
 225 230 235 240

Ser Leu Asp Pro Ser Lys Tyr Pro Leu Ser Gln Asp Asp Ile Asp Gly
 245 250 255

Ile Gln Ser Ile Tyr Gly Ser Pro Pro Lys Val Thr Thr Lys Pro Ser
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Gly Asn Ser Glu Pro His Ala Cys Asp Pro Thr Leu Thr Phe Asp Ala
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Ile Thr Thr Phe Arg Arg Glu Val Met Phe Phe Lys Gly Arg His Leu
 290 295 300

Trp Arg Val Tyr Ser Asp Ile Ala Gly Ala Glu Phe Glu Phe Ile Asp
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Ser Phe Trp Pro Ser Leu Pro Ala Asp Leu Gln Ala Ala Tyr Glu Ser
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Pro Arg Asp Glu Leu Leu Val Phe Lys Asp Glu Asn Phe Trp Val Ile
340 345 350

Arg Gly Tyr Ser Val Leu Pro Gly Tyr Pro Lys Ser Ile His Thr Leu
355 360 365

Gly Phe Pro Arg Arg Val Lys Lys Ile Asp Ala Ala Val Cys Asp His
370 375 380

Asp Thr Arg Lys Thr Phe Phe Phe Val Gly Ile Trp Cys Trp Arg Tyr
385 390 395 400

Asp Glu Met Ala Gln Ala Met Asp Arg Gly Phe Pro Gln Arg Ile Ile
405 410 415

Lys Cys Phe Pro Gly Ile Arg Leu Arg Val Asp Ala Val Phe Gln His
420 425 430

Asn Gly Phe Leu Tyr Phe Phe His Gly Ser Arg Gln Phe Glu Tyr Asp
435 440 445

Met Lys Ala Lys Asn Ile Thr Gln Val Ile Lys Thr Asn Ser Trp Phe
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Leu Cys Asn Glu Pro Leu Asn Ala Ser Phe Asn Val Ser Val Lys Gly
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Lys Ala Asn Ser Ile Gly Thr Val Ile Leu His His Lys Arg Leu Ser
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<210> 184

<211> 17

<212> PRT

<213> Mus sp.

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Gln	Tyr	Gly	Tyr	Thr	Leu	Pro	Gly	Trp	Arg	Lys	Tyr	Ser	Leu	Thr	Tyr
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Gln Ser Ile Tyr Gly Ser Pro Pro Lys Val Thr Thr Lys Pro Ser Gly		
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Asn Ser Glu Pro His Ala Cys Asp Pro Thr Leu Thr Phe Asp Ala Ile		
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Thr Thr Phe Arg Arg Glu Val Met Phe Phe Lys Gly Arg His Leu Trp		
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Glu Met Ala Gln Ala Met Asp Arg Gly Phe Pro Gln Arg Ile Ile Lys		
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Cys Phe Pro Gly Ile Arg Leu Arg Val Asp Ala Val Phe Gln His Asn		
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Gly Phe Leu Tyr Phe Phe His Gly Ser Arg Gln Phe Glu Tyr Asp Met		
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Cys Asn Glu Pro Leu Asn Ala Ser Phe Asn Val Ser Val Lys Gly Lys		
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<210> 192

<211> 1059

<212> DNA

<213> Homo sapiens

<400> 192

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<210> 193

<211> 353

<212> PRT

<213> Homo sapiens

<400> 193

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Thr Arg Pro Cys Phe Pro Gly Cys Gln Cys Glu Val Glu Thr Phe Gly
          20                      25                      30

```

```

Leu Phe Asp Ser Phe Ser Leu Thr Arg Val Asp Cys Ser Gly Leu Gly
          35                      40                      45

```

```

Pro His Ile Met Pro Val Pro Ile Pro Leu Asp Thr Ala His Leu Asp
          50                      55                      60

```

```

Leu Ser Ser Asn Arg Leu Glu Met Val Asn Glu Ser Val Leu Ala Gly
          65                      70                      75                      80

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```

Pro Gly Tyr Thr Thr Leu Ala Gly Leu Asp Leu Ser His Asn Leu Leu
          85                      90                      95

```

```

Thr Ser Ile Ser Pro Thr Ala Phe Ser Arg Leu Arg Tyr Leu Glu Ser
          100                      105                      110

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```

Leu Asp Leu Ser His Asn Gly Leu Thr Ala Leu Pro Ala Glu Ser Phe
          115                      120                      125

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```

Thr Ser Ser Pro Leu Ser Asp Val Asn Leu Ser His Asn Gln Leu Arg
          130                      135                      140

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Glu Val Ser Val Ser Ala Phe Thr Thr His Ser Gln Gly Arg Ala Leu
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His Val Asp Leu Ser His Asn Leu Ile His Arg Leu Val Pro His Pro
165 170 175

Thr Arg Ala Gly Leu Pro Ala Pro Thr Ile Gln Ser Leu Asn Leu Ala
180 185 190

Trp Asn Arg Leu His Ala Val Pro Asn Leu Arg Asp Leu Pro Leu Arg
195 200 205

Tyr Leu Ser Leu Asp Gly Asn Pro Leu Ala Val Ile Gly Pro Gly Ala
210 215 220

Phe Ala Gly Leu Gly Gly Leu Thr His Leu Ser Leu Ala Ser Leu Gln
225 230 235 240

Arg Leu Pro Glu Leu Ala Pro Ser Gly Phe Arg Glu Leu Pro Gly Leu
245 250 255

Gln Val Leu Asp Leu Ser Gly Asn Pro Lys Leu Asn Trp Ala Gly Ala
260 265 270

Glu Val Phe Ser Gly Leu Ser Ser Leu Gln Glu Leu Asp Leu Ser Gly
275 280 285

Thr Asn Leu Val Pro Leu Pro Glu Ala Leu Leu Leu His Leu Pro Ala
290 295 300

Leu Gln Ser Val Ser Val Gly Gln Asp Val Arg Cys Arg Arg Leu Val
305 310 315 320

Arg Glu Gly Thr Tyr Pro Arg Arg Pro Gly Ser Ser Pro Lys Val Ala
325 330 335

Leu His Cys Val Asp Thr Arg Glu Ser Ala Ala Arg Gly Pro Thr Ile
340 345 350

Leu

<210> 194
<211> 16
<212> PRT
<213> Homo sapiens

<400> 194
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1 5 10 15

<210> 195

<211> 337

<212> PRT

<213> Homo sapiens

<400> 195

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20 25 30

Pro His Ile Met Pro Val Pro Ile Pro Leu Asp Thr Ala His Leu Asp
35 40 45

Leu Ser Ser Asn Arg Leu Glu Met Val Asn Glu Ser Val Leu Ala Gly
50 55 60

Pro Gly Tyr Thr Thr Leu Ala Gly Leu Asp Leu Ser His Asn Leu Leu
65 70 75 80

Thr Ser Ile Ser Pro Thr Ala Phe Ser Arg Leu Arg Tyr Leu Glu Ser
85 90 95

Leu Asp Leu Ser His Asn Gly Leu Thr Ala Leu Pro Ala Glu Ser Phe
100 105 110

Thr Ser Ser Pro Leu Ser Asp Val Asn Leu Ser His Asn Gln Leu Arg
115 120 125

Glu Val Ser Val Ser Ala Phe Thr Thr His Ser Gln Gly Arg Ala Leu
130 135 140

His Val Asp Leu Ser His Asn Leu Ile His Arg Leu Val Pro His Pro
145 150 155 160

Thr Arg Ala Gly Leu Pro Ala Pro Thr Ile Gln Ser Leu Asn Leu Ala
165 170 175

Trp Asn Arg Leu His Ala Val Pro Asn Leu Arg Asp Leu Pro Leu Arg
180 185 190

Tyr Leu Ser Leu Asp Gly Asn Pro Leu Ala Val Ile Gly Pro Gly Ala
195 200 205

Phe Ala Gly Leu Gly Gly Leu Thr His Leu Ser Leu Ala Ser Leu Gln
 210 215 220

Arg Leu Pro Glu Leu Ala Pro Ser Gly Phe Arg Glu Leu Pro Gly Leu
 225 230 235 240

Gln Val Leu Asp Leu Ser Gly Asn Pro Lys Leu Asn Trp Ala Gly Ala
 245 250 255

Glu Val Phe Ser Gly Leu Ser Ser Leu Gln Glu Leu Asp Leu Ser Gly
 260 265 270

Thr Asn Leu Val Pro Leu Pro Glu Ala Leu Leu Leu His Leu Pro Ala
 275 280 285

Leu Gln Ser Val Ser Val Gly Gln Asp Val Arg Cys Arg Arg Leu Val
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Arg Glu Gly Thr Tyr Pro Arg Arg Pro Gly Ser Ser Pro Lys Val Ala
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Leu His Cys Val Asp Thr Arg Glu Ser Ala Ala Arg Gly Pro Thr Ile
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Leu

<210> 196

<211> 200

<212> PRT

<213> Homo sapiens

<400> 196

Thr Arg Pro Cys Phe Pro Gly Cys Gln Cys Glu Val Glu Thr Phe Gly
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 20 25 30

Pro His Ile Met Pro Val Pro Ile Pro Leu Asp Thr Ala His Leu Asp
 35 40 45

Leu Ser Ser Asn Arg Leu Glu Met Val Asn Glu Ser Val Leu Ala Gly
 50 55 60

Pro Gly Tyr Thr Thr Leu Ala Gly Leu Asp Leu Ser His Asn Leu Leu
 65 70 75 80

Leu Gln Val Leu Asp Leu Ser Gly Asn Pro Lys Leu Asn Trp Ala Gly
 20 25 30
 Ala Glu Val Phe Ser Gly Leu Ser Ser Leu Gln Glu Leu Asp Leu Ser
 35 40 45
 Gly Thr Asn Leu Val Pro Leu Pro Glu Ala Leu Leu Leu His Leu Pro
 50 55 60
 Ala Leu Gln Ser Val Ser Val Gly Gln Asp Val Arg Cys Arg Arg Leu
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 Val Arg Glu Gly Thr Tyr Pro Arg Arg Pro Gly Ser Ser Pro Lys Val
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Ile Leu

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 <211> 2337
 <212> DNA
 <213> Homo sapiens

<400> 202
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<211> 778

<212> PRT

<213> Homo sapiens

<400> 203

Met Leu Ile Gly Glu Ile Phe Glu Leu Met Gln Phe Leu Phe Val Val
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Ala Phe Thr Thr Phe Leu Val Ser Cys Val Asp Tyr Asp Ile Leu Phe
 20 25 30

Ala Asn Lys Met Val Asn His Ser Leu His Pro Thr Glu Pro Val Lys
 35 40 45

Val Thr Leu Pro Asp Ala Phe Leu Pro Ala Gln Val Cys Ser Ala Arg
 50 55 60

Ile Gln Glu Asn Gly Ser Leu Ile Thr Ile Leu Val Ile Ala Gly Val
 65 70 75 80

Phe Trp Ile His Arg Leu Ile Lys Phe Ile Tyr Asn Ile Cys Cys Tyr
 85 90 95

Trp Glu Ile His Ser Phe Tyr Leu His Ala Leu Arg Ile Pro Met Ser
 100 105 110

Ala Leu Pro Tyr Cys Thr Trp Gln Glu Val Gln Ala Arg Ile Val Gln
 115 120 125

Thr Gln Lys Glu His Gln Ile Cys Ile His Lys Arg Glu Leu Thr Glu
 130 135 140

Leu Asp Ile Tyr His Arg Ile Leu Arg Phe Gln Asn Tyr Met Val Ala
 145 150 155 160

Leu Val Asn Lys Ser Leu Leu Pro Leu Arg Phe Arg Leu Pro Gly Leu
 165 170 175

Gly Glu Ala Val Phe Phe Thr Arg Gly Leu Lys Tyr Asn Phe Glu Leu
 180 185 190

Val	Glu	Val	Val	Gly	Val	Gly	Asp	Thr	Cys	Ser	Phe	Ala	Gln	Met	Asp	450	455	460	
Val	Arg	Gln	His	Gly	His	Pro	Gln	Trp	Leu	Ser	Ala	Gly	Gln	Thr	Glu	465	470	475	480
Ala	Ser	Val	Tyr	Gln	Gln	Ala	Glu	Asp	Gly	Lys	Thr	Glu	Leu	Ser	Leu	485	490	495	
Met	His	Phe	Ala	Ile	Thr	Asn	Pro	Gly	Trp	Gln	Pro	Pro	Arg	Glu	Ser	500	505	510	
Thr	Ala	Phe	Leu	Gly	Phe	Leu	Lys	Glu	Gln	Val	Gln	Arg	Asp	Gly	Ala	515	520	525	
Ala	Ala	Ser	Leu	Ala	Gln	Gly	Gly	Leu	Leu	Pro	Glu	Asn	Ala	Leu	Phe	530	535	540	
Thr	Ser	Ile	Gln	Ser	Leu	Gln	Ser	Glu	Ser	Glu	Pro	Leu	Ser	Leu	Ile	545	550	555	560
Ala	Asn	Val	Val	Ala	Gly	Ser	Ser	Cys	Arg	Gly	Pro	Pro	Leu	Pro	Arg	565	570	575	
Asp	Leu	Gln	Gly	Ser	Arg	His	Arg	Ala	Glu	Val	Ala	Ser	Ala	Leu	Arg	580	585	590	
Ser	Phe	Ser	Pro	Leu	Gln	Pro	Gly	Gln	Ala	Pro	Thr	Gly	Arg	Ala	His	595	600	605	
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Ser	Ser	Val	Trp	Glu	Gly	Gln	Leu	Gln	Ser	Leu	Val	Leu	Ser	Glu	Tyr	625	630	635	640
Ala	Ser	Thr	Glu	Met	Ser	Leu	His	Ala	Leu	Tyr	Met	His	Gln	Leu	His	645	650	655	
Lys	Gln	Gln	Ala	Gln	Ala	Glu	Pro	Glu	Arg	His	Val	Trp	His	Arg	Arg	660	665	670	
Glu	Ser	Asp	Glu	Ser	Gly	Glu	Ser	Ala	Pro	Asp	Glu	Gly	Gly	Glu	Gly	675	680	685	
Ala	Arg	Ala	Pro	Gln	Ser	Ile	Pro	Arg	Ser	Ala	Ser	Tyr	Pro	Cys	Ala	690	695	700	

Ala Pro Arg Pro Gly Ala Pro Glu Thr Thr Ala Leu His Gly Gly Phe
705 710 715 720

Gln Arg Arg Tyr Gly Gly Ile Thr Asp Pro Gly Thr Val Pro Arg Val
725 730 735

Pro Ser His Phe Ser Arg Leu Pro Leu Gly Gly Trp Ala Glu Asp Gly
740 745 750

Gln Ser Ala Ser Arg His Pro Glu Pro Val Pro Glu Glu Gly Ser Glu
755 760 765

Asp Glu Leu Pro Pro Gln Val His Lys Val
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<210> 204

<211> 25

<212> PRT

<213> Homo sapiens

<400> 204

Met Leu Ile Gly Glu Ile Phe Glu Leu Met Gln Phe Leu Phe Val Val
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Ala Phe Thr Thr Phe Leu Val Ser Cys
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<210> 205

<211> 753

<212> PRT

<213> Homo sapiens

<400> 205

Val Asp Tyr Asp Ile Leu Phe Ala Asn Lys Met Val Asn His Ser Leu
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His Pro Thr Glu Pro Val Lys Val Thr Leu Pro Asp Ala Phe Leu Pro
20 25 30

Ala Gln Val Cys Ser Ala Arg Ile Gln Glu Asn Gly Ser Leu Ile Thr
35 40 45

Ile Leu Val Ile Ala Gly Val Phe Trp Ile His Arg Leu Ile Lys Phe
50 55 60

Ile Tyr Asn Ile Cys Cys Tyr Trp Glu Ile His Ser Phe Tyr Leu His

65		70		75		80									
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			85						90					95	
Val	Gln	Ala	Arg	Ile	Val	Gln	Thr	Gln	Lys	Glu	His	Gln	Ile	Cys	Ile
		100						105					110		
His	Lys	Arg	Glu	Leu	Thr	Glu	Leu	Asp	Ile	Tyr	His	Arg	Ile	Leu	Arg
		115					120					125			
Phe	Gln	Asn	Tyr	Met	Val	Ala	Leu	Val	Asn	Lys	Ser	Leu	Leu	Pro	Leu
	130					135					140				
Arg	Phe	Arg	Leu	Pro	Gly	Leu	Gly	Glu	Ala	Val	Phe	Phe	Thr	Arg	Gly
145					150					155					160
Leu	Lys	Tyr	Asn	Phe	Glu	Leu	Ile	Leu	Phe	Trp	Gly	Pro	Gly	Ser	Leu
			165					170						175	
Phe	Leu	Asn	Glu	Trp	Ser	Leu	Lys	Ala	Glu	Tyr	Lys	Arg	Gly	Gly	Gln
		180						185					190		
Arg	Leu	Glu	Leu	Ala	Gln	Arg	Leu	Ser	Asn	Arg	Ile	Leu	Trp	Ile	Gly
	195						200					205			
Ile	Ala	Asn	Phe	Leu	Leu	Cys	Pro	Leu	Ile	Leu	Ile	Trp	Gln	Ile	Leu
	210					215					220				
Tyr	Ala	Phe	Phe	Ser	Tyr	Ala	Glu	Val	Leu	Lys	Arg	Glu	Pro	Gly	Ala
225					230					235					240
Leu	Gly	Ala	Arg	Cys	Trp	Ser	Leu	Tyr	Gly	Arg	Cys	Tyr	Leu	Arg	His
			245						250					255	
Phe	Asn	Glu	Leu	Glu	His	Glu	Leu	Gln	Ser	Arg	Leu	Asn	Arg	Gly	Tyr
		260						265					270		
Lys	Pro	Ala	Ser	Lys	Tyr	Met	Asn	Cys	Phe	Leu	Ser	Pro	Leu	Leu	Thr
		275					280					285			
Leu	Leu	Ala	Lys	Asn	Gly	Ala	Phe	Phe	Ala	Gly	Ser	Ile	Leu	Ala	Val
	290					295					300				
Leu	Ile	Ala	Leu	Thr	Ile	Tyr	Asp	Glu	Asp	Val	Leu	Ala	Val	Glu	His
305					310					315					320
Val	Leu	Thr	Thr	Val	Thr	Leu	Leu	Gly	Val	Thr	Val	Thr	Val	Cys	Arg

	325		330		335
Ser Phe Ile Pro Asp Gln His Met Val Phe Cys Pro Glu Gln Leu Leu	340		345		350
Arg Val Ile Leu Ala His Ile His Tyr Met Pro Asp His Trp Gln Gly	355		360		365
Asn Ala His Arg Ser Gln Thr Arg Asp Glu Phe Ala Gln Leu Phe Gln	370		375		380
Tyr Lys Ala Val Phe Ile Leu Glu Glu Leu Leu Ser Pro Ile Val Thr	385		390		395
Pro Leu Ile Leu Ile Phe Cys Leu Arg Pro Arg Ala Leu Glu Ile Ile	405		410		415
Asp Phe Phe Arg Asn Phe Thr Val Glu Val Val Gly Val Gly Asp Thr	420		425		430
Cys Ser Phe Ala Gln Met Asp Val Arg Gln His Gly His Pro Gln Trp	435		440		445
Leu Ser Ala Gly Gln Thr Glu Ala Ser Val Tyr Gln Gln Ala Glu Asp	450		455		460
Gly Lys Thr Glu Leu Ser Leu Met His Phe Ala Ile Thr Asn Pro Gly	465		470		475
Trp Gln Pro Pro Arg Glu Ser Thr Ala Phe Leu Gly Phe Leu Lys Glu	485		490		495
Gln Val Gln Arg Asp Gly Ala Ala Ala Ser Leu Ala Gln Gly Gly Leu	500		505		510
Leu Pro Glu Asn Ala Leu Phe Thr Ser Ile Gln Ser Leu Gln Ser Glu	515		520		525
Ser Glu Pro Leu Ser Leu Ile Ala Asn Val Val Ala Gly Ser Ser Cys	530		535		540
Arg Gly Pro Pro Leu Pro Arg Asp Leu Gln Gly Ser Arg His Arg Ala	545		550		555
Glu Val Ala Ser Ala Leu Arg Ser Phe Ser Pro Leu Gln Pro Gly Gln	565		570		575
Ala Pro Thr Gly Arg Ala His Ser Thr Met Thr Gly Ser Gly Val Asp					

Ala Gln Val Cys Ser Ala Arg Ile Gln Glu Asn Gly Ser
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 <211> 17
 <212> PRT
 <213> Homo sapiens

<400> 207
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 Ile

<210> 208
 <211> 141
 <212> PRT
 <213> Homo sapiens

<400> 208
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 Gln Glu Val Gln Ala Arg Ile Val Gln Thr Gln Lys Glu His Gln Ile
 35 40 45
 Cys Ile His Lys Arg Glu Leu Thr Glu Leu Asp Ile Tyr His Arg Ile
 50 55 60
 Leu Arg Phe Gln Asn Tyr Met Val Ala Leu Val Asn Lys Ser Leu Leu
 65 70 75 80
 Pro Leu Arg Phe Arg Leu Pro Gly Leu Gly Glu Ala Val Phe Phe Thr
 85 90 95
 Arg Gly Leu Lys Tyr Asn Phe Glu Leu Ile Leu Phe Trp Gly Pro Gly
 100 105 110
 Ser Leu Phe Leu Asn Glu Trp Ser Leu Lys Ala Glu Tyr Lys Arg Gly
 115 120 125
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130

135

140

<210> 209

<211> 25

<212> PRT

<213> Homo sapiens

<400> 209

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 1 5 10 15

Ile Trp Gln Ile Leu Tyr Ala Phe Phe
 20 25

<210> 210

<211> 66

<212> PRT

<213> Homo sapiens

<400> 210

Ser Tyr Ala Glu Val Leu Lys Arg Glu Pro Gly Ala Leu Gly Ala Arg
 1 5 10 15

Cys Trp Ser Leu Tyr Gly Arg Cys Tyr Leu Arg His Phe Asn Glu Leu
 20 25 30

Glu His Glu Leu Gln Ser Arg Leu Asn Arg Gly Tyr Lys Pro Ala Ser
 35 40 45

Lys Tyr Met Asn Cys Phe Leu Ser Pro Leu Leu Thr Leu Leu Ala Lys
 50 55 60

Asn Gly
 65

<210> 211

<211> 17

<212> PRT

<213> Homo sapiens

<400> 211

Ala Phe Phe Ala Gly Ser Ile Leu Ala Val Leu Ile Ala Leu Thr Ile
 1 5 10 15

Tyr

[illegible]

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Val Leu Thr Thr Val Thr Leu Leu Gly Val Thr Val Thr Val Cys Arg
  1             5             10             15
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Ser Phe Ile

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<400> 214
Pro Asp Gln His Met Val Phe Cys Pro Glu Gln Leu Leu Arg Val Ile
  1             5             10             15
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Leu Ala His Ile His Tyr Met Pro Asp His Trp Gln Gly Asn Ala His
20 25 30

Arg Ser Gln Thr Arg Asp Glu Phe Ala Gln Leu Phe Gln Tyr Lys Ala
35 40 45

Val Phe Ile Leu Glu Glu Leu Leu Ser Pro Ile Val Thr Pro Leu Ile
50 55 60

Leu Ile Phe Cys Leu Arg Pro Arg Ala Leu Glu Ile Ile Asp Phe Phe
65 70 75 80

Arg Asn Phe Thr Val Glu Val Val Gly Val Gly Asp Thr Cys Ser Phe

340

345

350

His Gly Gly Phe Gln Arg Arg Tyr Gly Gly Ile Thr Asp Pro Gly Thr
 355 360 365

Val Pro Arg Val Pro Ser His Phe Ser Arg Leu Pro Leu Gly Gly Trp
 370 375 380

Ala Glu Asp Gly Gln Ser Ala Ser Arg His Pro Glu Pro Val Pro Glu
 385 390 395 400

Glu Gly Ser Glu Asp Glu Leu Pro Pro Gln Val His Lys Val
 405 410

<210> 215

<211> 2448

<212> DNA

<213> Homo sapiens

<400> 215

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 tgtatgctca tcggggagat ctttgagctc atgcagttcc tctttgtggg tgccttcact 240
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<210> 216

<211> 816

<212> PRT

<213> Homo sapiens

<400> 216

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Met Ala Gln Phe Asp Thr Glu Tyr Gln Arg Leu Glu Ala Ser Tyr Ser
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```

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Asp Ser Pro Pro Gly Glu Glu Asp Leu Leu Val His Val Ala Glu Gly
          20                      25                      30

```

```

Ser Lys Ser Pro Trp His His Ile Glu Asn Leu Asp Leu Phe Phe Ser
          35                      40                      45

```

```

Arg Val Tyr Asn Leu His Gln Lys Asn Gly Phe Thr Cys Met Leu Ile
          50                      55                      60

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```

Gly Glu Ile Phe Glu Leu Met Gln Phe Leu Phe Val Val Ala Phe Thr
          65                      70                      75                      80

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```

Thr Phe Leu Val Ser Cys Val Asp Tyr Asp Ile Leu Phe Ala Asn Lys
          85                      90                      95

```

```

Met Val Asn His Ser Leu His Pro Thr Glu Pro Val Lys Val Thr Leu
          100                      105                      110

```

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Pro Asp Ala Phe Leu Pro Ala Gln Val Cys Ser Ala Arg Ile Gln Glu
          115                      120                      125

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```

Asn Gly Ser Leu Ile Thr Ile Leu Val Ile Ala Gly Val Phe Trp Ile
          130                      135                      140

```


Val	Leu	Ala	Val	Glu	His	Val	Leu	Thr	Thr	Val	Thr	Leu	Leu	Gly	Val	405	410	415	
Thr	Val	Thr	Val	Cys	Arg	Ser	Phe	Ile	Pro	Asp	Gln	His	Met	Val	Phe	420	425	430	
Cys	Pro	Glu	Gln	Leu	Leu	Arg	Val	Ile	Leu	Ala	His	Ile	His	Tyr	Met	435	440	445	
Pro	Asp	His	Trp	Gln	Gly	Asn	Ala	His	Arg	Ser	Gln	Thr	Arg	Asp	Glu	450	455	460	
Phe	Ala	Gln	Leu	Phe	Gln	Tyr	Lys	Ala	Val	Phe	Ile	Leu	Glu	Glu	Leu	465	470	475	480
Leu	Ser	Pro	Ile	Val	Thr	Pro	Leu	Ile	Leu	Ile	Phe	Cys	Leu	Arg	Pro	485	490	495	
Arg	Ala	Leu	Glu	Ile	Ile	Asp	Phe	Phe	Arg	Asn	Phe	Thr	Val	Glu	Val	500	505	510	
Val	Gly	Val	Gly	Asp	Thr	Cys	Ser	Phe	Ala	Gln	Met	Asp	Val	Arg	Gln	515	520	525	
His	Gly	His	Pro	Gln	Trp	Leu	Ser	Ala	Gly	Gln	Thr	Glu	Ala	Ser	Val	530	535	540	
Tyr	Gln	Gln	Ala	Glu	Asp	Gly	Lys	Thr	Glu	Leu	Ser	Leu	Met	His	Phe	545	550	555	560
Ala	Ile	Thr	Asn	Pro	Gly	Trp	Gln	Pro	Pro	Arg	Glu	Ser	Thr	Ala	Phe	565	570	575	
Leu	Gly	Phe	Leu	Lys	Glu	Gln	Val	Gln	Arg	Asp	Gly	Ala	Ala	Ala	Ser	580	585	590	
Leu	Ala	Gln	Gly	Gly	Leu	Leu	Pro	Glu	Asn	Ala	Leu	Phe	Thr	Ser	Ile	595	600	605	
Gln	Ser	Leu	Gln	Ser	Glu	Ser	Glu	Pro	Leu	Ser	Leu	Ile	Ala	Asn	Val	610	615	620	
Val	Ala	Gly	Ser	Ser	Cys	Arg	Gly	Pro	Pro	Leu	Pro	Arg	Asp	Leu	Gln	625	630	635	640
Gly	Ser	Arg	Arg	Ala	His	Ser	Thr	Met	Thr	Gly	Ser	Gly	Val	Asp	Ala	645	650	655	

Arg Thr Ala Ser Ser Gly Ser Ser Val Trp Glu Gly Gln Leu Gln Ser
660 665 670

Leu Val Leu Ser Glu Tyr Ala Ser Thr Glu Met Ser Leu His Ala Leu
675 680 685

Tyr Met His Gln Leu His Lys Gln Gln Ala Gln Ala Glu Pro Glu Arg
690 695 700

His Val Trp His Arg Arg Glu Ser Asp Glu Ser Gly Glu Ser Ala Pro
705 710 715 720

Asp Glu Gly Gly Glu Gly Ala Arg Ala Pro Gln Ser Ile Pro Arg Ser
725 730 735

Ala Ser Tyr Pro Cys Ala Ala Pro Arg Pro Gly Ala Pro Glu Thr Thr
740 745 750

Ala Leu His Gly Gly Phe Gln Arg Arg Tyr Gly Gly Ile Thr Asp Pro
755 760 765

Gly Thr Val Pro Arg Val Pro Ser His Phe Ser Arg Leu Pro Leu Gly
770 775 780

Gly Trp Ala Glu Asp Gly Gln Ser Ala Ser Arg His Pro Glu Pro Val
785 790 795 800

Pro Glu Glu Gly Ser Glu Asp Glu Leu Pro Pro Gln Val His Lys Val
805 810 815

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<210> 221
<211> 2989
<212> DNA
<213> Homo sapiens

<400> 221

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<210> 222
<211> 795
<212> DNA
<213> Homo sapiens

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<210> 223
<211> 265
<212> PRT
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<400> 223
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20 25 30

Ser Phe Leu Phe Ser Ala Leu Tyr Ala Ala Phe Ile Phe Gly Gly Arg
35 40 45

His Leu Met Asn Lys Arg Ala Lys Phe Glu Leu Arg Lys Pro Leu Val
50 55 60

Leu Trp Ser Leu Thr Leu Ala Val Phe Ser Ile Phe Gly Ala Leu Arg
65 70 75 80

Thr Gly Ala Tyr Met Val Tyr Ile Leu Met Thr Lys Gly Leu Lys Gln
85 90 95

Ser Val Cys Asp Gln Gly Phe Tyr Asn Gly Pro Val Ser Lys Phe Trp
100 105 110

Ala Tyr Ala Phe Val Leu Ser Lys Ala Pro Glu Leu Gly Asp Thr Ile
115 120 125

Phe Ile Ile Leu Arg Lys Gln Lys Leu Ile Phe Leu His Trp Tyr His
130 135 140

His Ile Thr Val Leu Leu Tyr Ser Trp Tyr Ser Tyr Lys Asp Met Val
145 150 155 160

Ala Gly Gly Gly Trp Phe Met Thr Met Asn Tyr Gly Val His Ala Val
165 170 175

Met Tyr Ser Tyr Tyr Ala Leu Arg Ala Ala Gly Phe Arg Val Ser Arg
180 185 190

Lys Phe Ala Met Phe Ile Thr Leu Ser Gln Ile Thr Gln Met Leu Met
195 200 205

Gly Cys Val Val Asn Tyr Leu Val Phe Cys Trp Met Gln His Asp Gln
210 215 220

Cys His Ser His Phe Gln Asn Ile Phe Trp Ser Ser Leu Met Tyr Leu
225 230 235 240

Ser Tyr Leu Val Leu Phe Cys His Phe Phe Phe Glu Ala Tyr Ile Gly
245 250 255

Lys Met Arg Lys Thr Thr Lys Ala Glu
260 265

<210> 224
 <211> 46
 <212> PRT
 <213> Homo sapiens

<400> 224
 Met Asn Met Ser Val Leu Thr Leu Gln Glu Tyr Glu Phe Glu Lys Gln
 1 5 10 15
 Phe Asn Glu Asn Glu Ala Ile Gln Trp Met Gln Glu Asn Trp Lys Lys
 20 25 30
 Ser Phe Leu Phe Ser Ala Leu Tyr Ala Ala Phe Ile Phe Gly
 35 40 45

<210> 225
 <211> 219
 <212> PRT
 <213> Homo sapiens

<400> 225
 Gly Arg His Leu Met Asn Lys Arg Ala Lys Phe Glu Leu Arg Lys Pro
 1 5 10 15
 Leu Val Leu Trp Ser Leu Thr Leu Ala Val Phe Ser Ile Phe Gly Ala
 20 25 30
 Leu Arg Thr Gly Ala Tyr Met Val Tyr Ile Leu Met Thr Lys Gly Leu
 35 40 45
 Lys Gln Ser Val Cys Asp Gln Gly Phe Tyr Asn Gly Pro Val Ser Lys
 50 55 60
 Phe Trp Ala Tyr Ala Phe Val Leu Ser Lys Ala Pro Glu Leu Gly Asp
 65 70 75 80
 Thr Ile Phe Ile Ile Leu Arg Lys Gln Lys Leu Ile Phe Leu His Trp
 85 90 95
 Tyr His His Ile Thr Val Leu Leu Tyr Ser Trp Tyr Ser Tyr Lys Asp
 100 105 110
 Met Val Ala Gly Gly Gly Trp Phe Met Thr Met Asn Tyr Gly Val His
 115 120 125
 Ala Val Met Tyr Ser Tyr Tyr Ala Leu Arg Ala Ala Gly Phe Arg Val

130		135		140
Ser Arg Lys Phe Ala Met Phe Ile Thr Leu Ser Gln Ile Thr Gln Met				
145		150		155
				160
Leu Met Gly Cys Val Val Asn Tyr Leu Val Phe Cys Trp Met Gln His				
	165		170	175
Asp Gln Cys His Ser His Phe Gln Asn Ile Phe Trp Ser Ser Leu Met				
	180		185	190
Tyr Leu Ser Tyr Leu Val Leu Phe Cys His Phe Phe Phe Glu Ala Tyr				
	195		200	205
Ile Gly Lys Met Arg Lys Thr Thr Lys Ala Glu				
210		215		

<210> 226
 <211> 16
 <212> PRT
 <213> Homo sapiens

<400> 226
Gly Arg His Leu Met Asn Lys Arg Ala Lys Phe Glu Leu Arg Lys Pro
1 5 10 15

<210> 227
 <211> 17
 <212> PRT
 <213> Homo sapiens

<400> 227
Leu Val Leu Trp Ser Leu Thr Leu Ala Val Phe Ser Ile Phe Gly Ala
1 5 10 15

Leu

<210> 228
 <211> 57
 <212> PRT
 <213> Homo sapiens

<400> 228
Arg Thr Gly Ala Tyr Met Val Tyr Ile Leu Met Thr Lys Gly Leu Lys

<210> 232
 <211> 10
 <212> PRT
 <213> Homo sapiens

<400> 232
 Arg Ala Ala Gly Phe Arg Val Ser Arg Lys
 1 5 10

<210> 233
 <211> 24
 <212> PRT
 <213> Homo sapiens

<400> 233
 Phe Ala Met Phe Ile Thr Leu Ser Gln Ile Thr Gln Met Leu Met Gly
 1 5 10 15

Cys Val Val Asn Tyr Leu Val Phe
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<210> 234
 <211> 14
 <212> PRT
 <213> Homo sapiens

<400> 234
 Cys Trp Met Gln His Asp Gln Cys His Ser His Phe Gln Asn
 1 5 10

<210> 235
 <211> 20
 <212> PRT
 <213> Homo sapiens

<400> 235
 Ile Phe Trp Ser Ser Leu Met Tyr Leu Ser Tyr Leu Val Leu Phe Cys
 1 5 10 15

His Phe Phe Phe
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<210> 236
 <211> 14

<212> PRT
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<400> 236
 Glu Ala Tyr Ile Gly Lys Met Arg Lys Thr Thr Lys Ala Glu
 1 5 10

<210> 237
 <400> 237
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<210> 238
 <211> 813
 <212> DNA
 <213> Homo sapiens

<400> 238
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 caaacctgtg gctttgccat ctacacggat gacgcgtag tcagattctg gtcctthctc 360
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<210> 239
 <211> 265
 <212> PRT
 <213> Mus sp.

<400> 239
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 1 5 10 15

Phe Asn Glu Asn Glu Ala Ile Gln Trp Met Gln Glu Asn Trp Lys Lys
 20 25 30

Ser Phe Leu Phe Ser Ala Leu Tyr Ala Ala Phe Ile Phe Gly Gly Arg

35	40	45
His Leu Met Asn Lys Arg Ala Lys Phe Glu Leu Arg Lys Pro Leu Val		
50	55	60
Leu Trp Ser Leu Thr Leu Ala Val Phe Ser Ile Phe Gly Ala Leu Arg		
65	70	75 80
Thr Gly Ala Tyr Met Val Tyr Ile Leu Met Thr Lys Gly Leu Lys Gln		
85	90	95
Ser Val Cys Asp Gln Gly Phe Tyr Asn Gly Pro Val Ser Lys Phe Trp		
100	105	110
Ala Tyr Ala Phe Val Leu Ser Lys Ala Pro Glu Leu Gly Asp Thr Ile		
115	120	125
Phe Ile Ile Leu Arg Lys Gln Lys Leu Ile Phe Leu His Trp Tyr His		
130	135	140
His Ile Thr Val Leu Leu Tyr Ser Trp Tyr Ser Tyr Lys Asp Met Val		
145	150	155 160
Ala Gly Gly Gly Trp Phe Met Thr Met Asn Tyr Gly Val His Ala Val		
165	170	175
Met Tyr Ser Tyr Tyr Ala Leu Arg Ala Ala Gly Phe Arg Val Ser Arg		
180	185	190
Lys Phe Ala Met Phe Ile Thr Leu Ser Gln Ile Thr Gln Met Leu Met		
195	200	205
Gly Cys Val Val Asn Tyr Leu Val Phe Cys Trp Met Gln His Asp Gln		
210	215	220
Cys His Ser His Phe Gln Asn Ile Phe Trp Ser Ser Leu Met Tyr Leu		
225	230	235 240
Ser Tyr Leu Val Leu Phe Cys His Phe Phe Phe Glu Ala Tyr Ile Gly		
245	250	255
Lys Met Arg Lys Thr Thr Lys Ala Glu		
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<210> 240

<400> 240

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<210> 241
 <211> 2032
 <212> DNA
 <213> Mus sp.

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<210> 242
 <211> 522
 <212> DNA
 <213> Mus sp.

<400> 242

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atcttctgggt cctcgctcat gtacctcagc taccttgtgc tcttctgccca tttcttcttt 480
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<210> 243

<211> 174

<212> PRT

<213> Mus sp.

<400> 243

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Leu Lys Gln Ser Val Cys Asp Gln Ser Phe Tyr Asn Gly Pro Val Ser
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      20                      25                      30

Asp Thr Ile Phe Ile Ile Leu Arg Lys Gln Lys Leu Ile Phe Leu His
      35                      40                      45

Trp Tyr His His Ile Thr Val Leu Leu Tyr Ser Trp Tyr Ser Tyr Lys
      50                      55                      60

Asp Met Val Ala Gly Gly Gly Trp Phe Met Thr Met Asn Tyr Gly Val
      65                      70                      75                      80

His Ala Val Met Tyr Ser Tyr Tyr Ala Leu Arg Ala Ala Gly Phe Arg
      85                      90                      95

Val Ser Arg Lys Phe Ala Met Phe Ile Thr Leu Ser Gln Ile Thr Gln
      100                      105                      110

Met Leu Met Gly Cys Val Ile Asn Tyr Leu Val Phe Asn Trp Met Gln
      115                      120                      125

His Asp Asn Asp Gln Cys Tyr Ser His Phe Gln Asn Ile Phe Trp Ser
      130                      135                      140

Ser Leu Met Tyr Leu Ser Tyr Leu Val Leu Phe Cys His Phe Phe Phe
      145                      150                      155                      160
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Glu Ala Tyr Ile Gly Lys Val Lys Lys Ala Thr Lys Ala Glu
 165 170

<210> 244
 <211> 49
 <212> PRT
 <213> Mus sp.

<400> 244
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 1 5 10 15

Lys Phe Trp Ala Tyr Ala Phe Val Leu Ser Lys Ala Pro Glu Leu Gly
 20 25 30

Asp Thr Ile Phe Ile Ile Leu Arg Lys Gln Lys Leu Ile Phe Leu His
 35 40 45

Trp

<210> 245
 <211> 17
 <212> PRT
 <213> Mus sp.

<400> 245
 Tyr His His Ile Thr Val Leu Leu Tyr Ser Trp Tyr Ser Tyr Lys Asp
 1 5 10 15

Met

<210> 246
 <211> 11
 <212> PRT
 <213> Mus sp.

<400> 246
 Val Ala Gly Gly Gly Trp Phe Met Thr Met Asn
 1 5 10

<210> 247

<211> 19
<212> PRT
<213> Mus sp.

<400> 247
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1 5 10 15

Gly Phe Arg

<210> 248
<211> 10
<212> PRT
<213> Mus sp.

<400> 248
Val Ser Arg Lys Phe Ala Met Phe Ile Thr
1 5 10

<210> 249
<211> 24
<212> PRT
<213> Mus sp.

<400> 249
Leu Ser Gln Ile Thr Gln Met Leu Met Gly Cys Val Ile Asn Tyr Leu
1 5 10 15

Val Phe Asn Trp Met Gln His Asp
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<210> 250
<211> 16
<212> PRT
<213> Mus sp.

<400> 250
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1 5 10 15

<210> 251
<211> 974
<212> DNA

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Gly	Val	His	Ala	Val	Met	Tyr	Ser	Tyr	Tyr	Ala	Leu	Arg	Ala	Ala	Gly	
50					55					60						
Phe	Arg	Val	Ser	Arg	Lys	Phe	Ala	Met	Phe	Ile	Thr	Leu	Ser	Gln	Ile	
65					70					75					80	
Thr	Gln	Met	Leu	Met	Gly	Cys	Val	Ile	Asn	Tyr	Leu	Val	Phe	Asn	Trp	
85					90					95						
Met	Gln	His	Asp	Asn	Asp	Gln	Cys	Tyr	Ser	His	Phe	Gln	Asn	Ile	Phe	
100					105					110						
Trp	Ser	Ser	Leu	Met	Tyr	Leu	Ser	Tyr	Leu	Leu	Leu	Phe	Cys	His	Phe	
115					120					125						
Phe	Phe	Glu	Ala	Tyr	Ile	Gly	Lys	Val	Lys	Lys	Ala	Thr	Lys	Ala	Glu	
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<210> 272

<211> 1365

<212> DNA

<213> Homo sapiens

<400> 272

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<210> 273

<211> 455

<212> PRT

<213> Homo sapiens

<400> 273

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20 25 30

Asn Cys Pro Tyr Lys Cys Ile Cys Ala Ala Asp Leu Leu Ser Cys Thr
35 40 45

Gly Leu Gly Leu Gln Asp Val Pro Ala Glu Leu Pro Ala Ala Thr Ala
50 55 60

Asp Leu Asp Leu Ser His Asn Ala Leu Gln Arg Leu Arg Pro Gly Trp
65 70 75 80

Leu Ala Pro Leu Phe Gln Leu Arg Ala Leu His Leu Asp His Asn Glu
85 90 95

Leu Asp Ala Leu Gly Arg Gly Val Phe Val Asn Ala Ser Gly Leu Arg
100 105 110

Leu Leu Asp Leu Ser Ser Asn Thr Leu Arg Ala Leu Gly Arg His Asp
115 120 125

Leu Asp Gly Leu Gly Ala Leu Glu Lys Leu Leu Leu Phe Asn Asn Arg
130 135 140

Leu Val His Leu Asp Glu His Ala Phe His Gly Leu Arg Ala Leu Ser
145 150 155 160

His Leu Tyr Leu Gly Cys Asn Glu Leu Ala Ser Phe Ser Phe Asp His
165 170 175

Leu His Gly Leu Ser Ala Thr His Leu Leu Thr Leu Asp Leu Ser Ser

180	185	190
Asn Arg Leu Gly His Ile Ser Val Pro Glu Leu Ala Ala Leu Pro Ala		
195	200	205
Phe Leu Lys Asn Gly Leu Tyr Leu His Asn Asn Pro Leu Pro Cys Asp		
210	215	220
Cys Arg Leu Tyr His Leu Leu Gln Arg Trp His Gln Arg Gly Leu Ser		
225	230	235
Ala Val Arg Asp Phe Ala Arg Glu Tyr Val Cys Leu Ala Phe Lys Val		
245	250	255
Pro Ala Ser Arg Val Arg Phe Phe Gln His Ser Arg Val Phe Glu Asn		
260	265	270
Cys Ser Ser Ala Pro Ala Leu Gly Leu Lys Arg Pro Glu Glu His Leu		
275	280	285
Tyr Ala Leu Val Gly Arg Ser Leu Arg Leu Tyr Cys Asn Thr Ser Val		
290	295	300
Pro Ala Met Arg Ile Ala Trp Val Ser Pro Gln Gln Glu Leu Leu Arg		
305	310	315
Ala Pro Gly Ser Arg Asp Gly Ser Ile Ala Val Leu Ala Asp Gly Ser		
325	330	335
Leu Ala Ile Gly Asn Val Gln Glu Gln His Ala Gly Leu Phe Val Cys		
340	345	350
Leu Ala Thr Gly Pro Arg Leu His His Asn Gln Thr His Glu Tyr Asn		
355	360	365
Val Ser Val His Phe Pro Arg Pro Glu Pro Glu Ala Phe Asn Thr Gly		
370	375	380
Phe Thr Thr Leu Leu Gly Cys Ala Val Gly Leu Val Leu Val Leu Leu		
385	390	395
Tyr Leu Phe Ala Pro Pro Cys Arg Cys Cys Arg Arg Ala Cys Pro Leu		
405	410	415
Pro Pro Leu Ala Pro Asn Thr Gln Pro Ala Pro Arg Ala Glu Pro His		
420	425	430
Lys Ser Ser Val Leu Ser Thr Thr Pro Pro Asp Ala Pro Ser Pro Gln		

435

440

445

Gly Gln Ala Ser Thr Ser Thr
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<210> 274

<211> 20

<212> PRT

<213> Homo sapiens

<400> 274

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Gly Leu Gly Thr
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<210> 275

<211> 435

<212> PRT

<213> Homo sapiens

<400> 275

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 20 25 30

Gln Asp Val Pro Ala Glu Leu Pro Ala Ala Thr Ala Asp Leu Asp Leu
 35 40 45

Ser His Asn Ala Leu Gln Arg Leu Arg Pro Gly Trp Leu Ala Pro Leu
 50 55 60

Phe Gln Leu Arg Ala Leu His Leu Asp His Asn Glu Leu Asp Ala Leu
 65 70 75 80

Gly Arg Gly Val Phe Val Asn Ala Ser Gly Leu Arg Leu Leu Asp Leu
 85 90 95

Ser Ser Asn Thr Leu Arg Ala Leu Gly Arg His Asp Leu Asp Gly Leu
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Gly Ala Leu Glu Lys Leu Leu Leu Phe Asn Asn Arg Leu Val His Leu
 115 120 125

Asp Glu His Ala Phe His Gly Leu Arg Ala Leu Ser His Leu Tyr Leu
 130 135 140

Gly Cys Asn Glu Leu Ala Ser Phe Ser Phe Asp His Leu His Gly Leu
 145 150 155 160

Ser Ala Thr His Leu Leu Thr Leu Asp Leu Ser Ser Asn Arg Leu Gly
 165 170 175

His Ile Ser Val Pro Glu Leu Ala Ala Leu Pro Ala Phe Leu Lys Asn
 180 185 190

Gly Leu Tyr Leu His Asn Asn Pro Leu Pro Cys Asp Cys Arg Leu Tyr
 195 200 205

His Leu Leu Gln Arg Trp His Gln Arg Gly Leu Ser Ala Val Arg Asp
 210 215 220

Phe Ala Arg Glu Tyr Val Cys Leu Ala Phe Lys Val Pro Ala Ser Arg
 225 230 235 240

Val Arg Phe Phe Gln His Ser Arg Val Phe Glu Asn Cys Ser Ser Ala
 245 250 255

Pro Ala Leu Gly Leu Lys Arg Pro Glu Glu His Leu Tyr Ala Leu Val
 260 265 270

Gly Arg Ser Leu Arg Leu Tyr Cys Asn Thr Ser Val Pro Ala Met Arg
 275 280 285

Ile Ala Trp Val Ser Pro Gln Gln Glu Leu Leu Arg Ala Pro Gly Ser
 290 295 300

Arg Asp Gly Ser Ile Ala Val Leu Ala Asp Gly Ser Leu Ala Ile Gly
 305 310 315 320

Asn Val Gln Glu Gln His Ala Gly Leu Phe Val Cys Leu Ala Thr Gly
 325 330 335

Pro Arg Leu His His Asn Gln Thr His Glu Tyr Asn Val Ser Val His
 340 345 350

Phe Pro Arg Pro Glu Pro Glu Ala Phe Asn Thr Gly Phe Thr Thr Leu
 355 360 365

Leu Gly Cys Ala Val Gly Leu Val Leu Val Leu Leu Tyr Leu Phe Ala
 370 375 380

Pro Pro Cys Arg Cys Cys Arg Arg Ala Cys Pro Leu Pro Pro Leu Ala
 385 390 395 400

Pro Asn Thr Gln Pro Ala Pro Arg Ala Glu Pro His Lys Ser Ser Val
 405 410 415

Leu Ser Thr Thr Pro Pro Asp Ala Pro Ser Pro Gln Gly Gln Ala Ser
 420 425 430

Thr Ser Thr
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<210> 276

<211> 363

<212> PRT

<213> Homo sapiens

<400> 276

Pro Asp Ser Glu Gly Phe Pro Pro Arg Ala Leu His Asn Cys Pro Tyr
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Lys Cys Ile Cys Ala Ala Asp Leu Leu Ser Cys Thr Gly Leu Gly Leu
 20 25 30

Gln Asp Val Pro Ala Glu Leu Pro Ala Ala Thr Ala Asp Leu Asp Leu
 35 40 45

Ser His Asn Ala Leu Gln Arg Leu Arg Pro Gly Trp Leu Ala Pro Leu
 50 55 60

Phe Gln Leu Arg Ala Leu His Leu Asp His Asn Glu Leu Asp Ala Leu
 65 70 75 80

Gly Arg Gly Val Phe Val Asn Ala Ser Gly Leu Arg Leu Leu Asp Leu
 85 90 95

Ser Ser Asn Thr Leu Arg Ala Leu Gly Arg His Asp Leu Asp Gly Leu
 100 105 110

Gly Ala Leu Glu Lys Leu Leu Leu Phe Asn Asn Arg Leu Val His Leu
 115 120 125

Asp Glu His Ala Phe His Gly Leu Arg Ala Leu Ser His Leu Tyr Leu
 130 135 140

Gly Cys Asn Glu Leu Ala Ser Phe Ser Phe Asp His Leu His Gly Leu

145		150		155		160									
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His	Ile	Ser	Val	Pro	Glu	Leu	Ala	Ala	Leu	Pro	Ala	Phe	Leu	Lys	Asn
			180					185					190		
Gly	Leu	Tyr	Leu	His	Asn	Asn	Pro	Leu	Pro	Cys	Asp	Cys	Arg	Leu	Tyr
		195					200					205			
His	Leu	Leu	Gln	Arg	Trp	His	Gln	Arg	Gly	Leu	Ser	Ala	Val	Arg	Asp
		210					215				220				
Phe	Ala	Arg	Glu	Tyr	Val	Cys	Leu	Ala	Phe	Lys	Val	Pro	Ala	Ser	Arg
225					230					235					240
Val	Arg	Phe	Phe	Gln	His	Ser	Arg	Val	Phe	Glu	Asn	Cys	Ser	Ser	Ala
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Pro	Ala	Leu	Gly	Leu	Lys	Arg	Pro	Glu	Glu	His	Leu	Tyr	Ala	Leu	Val
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		275					280					285			
Ile	Ala	Trp	Val	Ser	Pro	Gln	Gln	Glu	Leu	Leu	Arg	Ala	Pro	Gly	Ser
		290				295					300				
Arg	Asp	Gly	Ser	Ile	Ala	Val	Leu	Ala	Asp	Gly	Ser	Leu	Ala	Ile	Gly
305					310					315				320	
Asn	Val	Gln	Glu	Gln	His	Ala	Gly	Leu	Phe	Val	Cys	Leu	Ala	Thr	Gly
			325						330				335		
Pro	Arg	Leu	His	His	Asn	Gln	Thr	His	Glu	Tyr	Asn	Val	Ser	Val	His
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<210> 277

<211> 20

<212> PRT

<213> Homo sapiens

<400> 277

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Leu Tyr Leu Phe
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<210> 278

<211> 52

<212> PRT

<213> Homo sapiens

<400> 278

Ala Pro Pro Cys Arg Cys Cys Arg Arg Ala Cys Pro Leu Pro Pro Leu
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Ala Pro Asn Thr Gln Pro Ala Pro Arg Ala Glu Pro His Lys Ser Ser
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Val Leu Ser Thr Thr Pro Pro Asp Ala Pro Ser Pro Gln Gly Gln Ala
 35 40 45

Ser Thr Ser Thr
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<210> 279

<211> 1518

<212> DNA

<213> Homo sapiens

<400> 279

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<210> 280

<211> 1113

<212> DNA

<213> Homo sapiens

<400> 280

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<210> 281

<211> 371

<212> PRT

<213> Homo sapiens

<400> 281

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10

15

Ile Ala Phe Phe Asn Phe Ala Gly Ile Ser Val Thr Lys Glu Leu Ser
 275 280 285

Ala Thr Thr Arg Met Val Leu Asp Ser Leu Arg Thr Val Val Ile Trp
 290 295 300

Ala Leu Ser Leu Ala Leu Gly Trp Glu Ala Phe His Ala Leu Gln Ile
 305 310 315 320

Leu Gly Phe Leu Ile Leu Leu Ile Gly Thr Ala Leu Tyr Asn Gly Leu
 325 330 335

His Arg Pro Leu Leu Gly Arg Leu Ser Arg Gly Arg Pro Leu Ala Glu
 340 345 350

Glu Ser Glu Gln Glu Arg Leu Leu Gly Gly Thr Arg Thr Pro Ile Asn
 355 360 365

Asp Ala Ser
 370

<210> 282
 <211> 18
 <212> PRT
 <213> Homo sapiens

<400> 282
 Met Ala Trp Thr Lys Tyr Gln Leu Phe Leu Ala Gly Leu Met Leu Val
 1 5 10 15

Thr Gly

<210> 283
 <211> 353
 <212> PRT
 <213> Homo sapiens

<400> 283
 Ser Ile Asn Thr Leu Ser Ala Lys Trp Ala Asp Asn Phe Met Ala Glu
 1 5 10 15

Gly Cys Gly Gly Ser Lys Glu His Ser Phe Gln His Pro Phe Leu Gln
 20 25 30

Ala Val Gly Met Phe Leu Gly Glu Phe Ser Cys Leu Ala Ala Phe Tyr

35	40	45
Leu Leu Arg Cys Arg Ala Ala Gly Gln Ser Asp Ser Ser Val Asp Pro		
50	55	60
Gln Gln Pro Phe Asn Pro Leu Leu Phe Leu Pro Pro Ala Leu Cys Asp		
65	70	75 80
Met Thr Gly Thr Ser Leu Met Tyr Val Ala Leu Asn Met Thr Ser Ala		
	85	90 95
Ser Ser Phe Gln Met Leu Arg Gly Ala Val Ile Ile Phe Thr Gly Leu		
	100	105 110
Phe Ser Val Ala Phe Leu Gly Arg Arg Leu Val Leu Ser Gln Trp Leu		
	115	120 125
Gly Ile Leu Ala Thr Ile Ala Gly Leu Val Val Val Gly Leu Ala Asp		
	130	135 140
Leu Leu Ser Lys His Asp Ser Gln His Lys Leu Ser Glu Val Ile Thr		
	145	150 155 160
Gly Asp Leu Leu Ile Ile Met Ala Gln Ile Ile Val Ala Ile Gln Met		
	165	170 175
Val Leu Glu Glu Lys Phe Val Tyr Lys His Asn Val His Pro Leu Arg		
	180	185 190
Ala Val Gly Thr Glu Gly Leu Phe Gly Phe Val Ile Leu Ser Leu Leu		
	195	200 205
Leu Val Pro Met Tyr Tyr Ile Pro Ala Gly Ser Phe Ser Gly Asn Pro		
	210	215 220
Arg Gly Thr Leu Glu Asp Ala Leu Asp Ala Phe Cys Gln Val Gly Gln		
	225	230 235 240
Gln Pro Leu Ile Ala Val Ala Leu Leu Gly Asn Ile Ser Ser Ile Ala		
	245	250 255
Phe Phe Asn Phe Ala Gly Ile Ser Val Thr Lys Glu Leu Ser Ala Thr		
	260	265 270
Thr Arg Met Val Leu Asp Ser Leu Arg Thr Val Val Ile Trp Ala Leu		
	275	280 285
Ser Leu Ala Leu Gly Trp Glu Ala Phe His Ala Leu Gln Ile Leu Gly		

290

295

300

Phe Leu Ile Leu Leu Ile Gly Thr Ala Leu Tyr Asn Gly Leu His Arg
 305 310 315 320

Pro Leu Leu Gly Arg Leu Ser Arg Gly Arg Pro Leu Ala Glu Glu Ser
 325 330 335

Glu Gln Glu Arg Leu Leu Gly Gly Thr Arg Thr Pro Ile Asn Asp Ala
 340 345 350

Ser

<210> 284

<211> 29

<212> PRT

<213> Homo sapiens

<400> 284

Ser Ile Asn Thr Leu Ser Ala Lys Trp Ala Asp Asn Phe Met Ala Glu
 1 5 10 15

Gly Cys Gly Gly Ser Lys Glu His Ser Phe Gln His Pro
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<210> 285

<211> 9

<212> PRT

<213> Homo sapiens

<400> 285

Asn Met Thr Ser Ala Ser Ser Phe Gln
 1 5

<210> 286

<211> 14

<212> PRT

<213> Homo sapiens

<400> 286

Asp Leu Leu Ser Lys His Asp Ser Gln His Lys Leu Ser Glu
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<210> 287

<211> 27

<212> PRT

<213> Homo sapiens

<400> 287

Pro Ala Gly Ser Phe Ser Gly Asn Pro Arg Gly Thr Leu Glu Asp Ala
1 5 10 15

Leu Asp Ala Phe Cys Gln Val Gly Gln Gln Pro
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<210> 288

<211> 7

<212> PRT

<213> Homo sapiens

<400> 288

Glu Ala Phe His Ala Leu Gln
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<210> 289

<211> 21

<212> PRT

<213> Homo sapiens

<400> 289

Phe Leu Gln Ala Val Gly Met Phe Leu Gly Glu Phe Ser Cys Leu Ala
1 5 10 15

Ala Phe Tyr Leu Leu
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<210> 290

<211> 21

<212> PRT

<213> Homo sapiens

<400> 290

Leu Leu Phe Leu Pro Pro Ala Leu Cys Asp Met Thr Gly Thr Ser Leu
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Met Tyr Val Ala Leu
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<210> 291
<211> 19
<212> PRT
<213> Homo sapiens

<400> 291
Met Leu Arg Gly Ala Val Ile Ile Phe Thr Gly Leu Phe Ser Val Ala
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<210> 292
<211> 17
<212> PRT
<213> Homo sapiens

<400> 292
Trp Leu Gly Ile Leu Ala Thr Ile Ala Gly Leu Val Val Val Gly Leu
1 5 10 15

Ala

<210> 293
<211> 17
<212> PRT
<213> Homo sapiens

<400> 293
Val Ile Thr Gly Asp Leu Leu Ile Ile Met Ala Gln Ile Ile Val Ala
1 5 10 15

Ile

<210> 294
<211> 18
<212> PRT
<213> Homo sapiens

<400> 294
Gly Leu Phe Gly Phe Val Ile Leu Ser Leu Leu Leu Val Pro Met Tyr
1 5 10 15

Tyr Ile

<210> 295

<211> 23

<212> PRT

<213> Homo sapiens

<400> 295

Leu Ile Ala Val Ala Leu Leu Gly Asn Ile Ser Ser Ile Ala Phe Phe
1 5 10 15

Asn Phe Ala Gly Ile Ser Val
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<210> 296

<211> 20

<212> PRT

<213> Homo sapiens

<400> 296

Met Val Leu Asp Ser Leu Arg Thr Val Val Ile Trp Ala Leu Ser Leu
1 5 10 15

Ala Leu Gly Trp
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<210> 297

<211> 17

<212> PRT

<213> Homo sapiens

<400> 297

Ile Leu Gly Phe Leu Ile Leu Leu Ile Gly Thr Ala Leu Tyr Asn Gly
1 5 10 15

Leu

<210> 298

<211> 20

<212> PRT

<213> Homo sapiens

<400> 298

Arg Cys Arg Ala Ala Gly Gln Ser Asp Ser Ser Val Asp Pro Gln Gln
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Pro Phe Asn Pro
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<210> 299

<211> 7

<212> PRT

<213> Homo sapiens

<400> 299

Arg Arg Leu Val Leu Ser Gln
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<210> 300

<211> 24

<212> PRT

<213> Homo sapiens

<400> 300

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<210> 301

<211> 9

<212> PRT

<213> Homo sapiens

<400> 301

Thr Lys Glu Leu Ser Ala Thr Thr Arg
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<210> 302

<211> 35

<212> PRT

<213> Homo sapiens

<400> 302

His Arg Pro Leu Leu Gly Arg Leu Ser Arg Gly Arg Pro Leu Ala Glu
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Glu Ser Glu Gln Glu Arg Leu Leu Gly Gly Thr Arg Thr Pro Ile Asn
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Asp Ala Ser
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<210> 303
 <211> 2811
 <212> DNA
 <213> Homo sapiens

<400> 303

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<211> 729

<212> DNA

<213> Homo sapiens

<400> 304

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<210> 305

<211> 243

<212> PRT

<213> Homo sapiens

<400> 305

Met Ala Pro His Trp Ala Val Trp Leu Leu Ala Ala Arg Leu Trp Gly
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Leu Gly Ile Gly Ala Glu Val Trp Trp Asn Leu Val Pro Arg Lys Thr
 20 25 30

Val Ser Ser Gly Glu Leu Ala Thr Val Val Arg Arg Phe Ser Gln Thr

35	40	45
Gly Ile Gln Asp Phe Leu Thr Leu Thr Glu Pro Thr Gly Leu		
50	55	60
Leu Tyr Val Gly Ala Arg Glu Ala Leu Phe Ala Phe Ser Met Glu Ala		
65	70	75 80
Leu Glu Leu Gln Gly Ala Ile Ser Trp Glu Ala Pro Val Glu Lys Lys		
	85 90	95
Thr Glu Cys Ile Gln Lys Gly Lys Asn Asn Gln Thr Glu Cys Phe Asn		
	100 105	110
Phe Ile Arg Phe Leu Gln Pro Tyr Asn Ala Ser His Leu Tyr Val Cys		
	115 120	125
Gly Thr Tyr Ala Phe Gln Pro Lys Cys Thr Tyr Val Val Ser Ala Ala		
	130 135	140
Leu Leu Pro Arg Cys Pro Gln Pro Pro Ala Leu Leu Thr Leu Leu Trp		
145	150 155	160
Thr Arg Gly Cys Gly Pro Gln Ser Pro Ala Leu Lys His Leu Leu Ile		
	165 170	175
Thr Ser Leu Ser Val Leu Arg Thr Cys Ser Pro Ser Leu Trp Ser Met		
	180 185	190
Glu Ser Leu Lys Met Gly Arg Ala Ser Val Pro Met Thr Gln Leu Arg		
	195 200	205
Ala Met Leu Ala Phe Leu Trp Met Val Ser Cys Thr Arg Pro His Ser		
	210 215	220
Thr Thr Ser Trp Ala Arg Asn Pro Leu Ser Cys Val Thr Trp Gly Pro		
225	230 235	240
Thr Thr Pro		

<210> 306

<211> 20

<212> PRT

<213> Homo sapiens

<400> 306

Phe Leu Trp Met Val Ser Cys Thr Arg Pro His Ser Thr Thr Ser Trp
 195 200 205

Ala Arg Asn Pro Leu Ser Cys Val Thr Trp Gly Pro Thr Thr Pro
 210 215 220

<210> 308
 <211> 2498
 <212> DNA
 <213> Homo sapiens

<400> 308

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ggaaccgccc caagaagagc ctctggcccg ggggctgctg gaacatgtgc ggggggacac 180
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<210> 309

<211> 678

<212> DNA

<213> Homo sapiens

<400> 309

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gagatttttg tggatgaaga taaaacgatt gcattttggc aggaatattc agctaaagga 300
ccaaccacaa aatcagatgg caacagagag aaaatagatg ttatgggcct tctgactgga 360
ttaattgctg ctggagtatt tttggttatt tttggattac ttggctacta tctttgtatc 420
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gtggaggatg caggattacc ttcttatgaa caggcagtgg cgctgaccag aaaacacagt 600
gtttcaccac caccaccata tcttgggcac acaaaaggat ttaggggtatt taaaaaatct 660
atgtctctcc catctcac 678

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<210> 310

<211> 226

<212> PRT

<213> Homo sapiens

<400> 310

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Met Phe Thr Leu Leu Val Leu Leu Ser Gln Leu Pro Thr Val Thr Leu
  1             5             10             15

```

```

Gly Phe Pro His Cys Ala Arg Gly Pro Lys Ala Ser Lys His Ala Gly
      20             25             30

```

```

Glu Glu Val Phe Thr Ser Lys Glu Glu Ala Asn Phe Phe Ile His Arg
  35             40             45

```

```

Arg Leu Leu Tyr Asn Arg Phe Asp Leu Glu Leu Phe Thr Pro Gly Asn
  50             55             60

```


Leu Glu Arg Glu Cys Asn Glu Glu Leu Cys Asn Tyr Glu Glu Ala Arg
65 70 75 80

Glu Ile Phe Val Asp Glu Asp Lys Thr Ile Ala Phe Trp Gln Glu Tyr
85 90 95

Ser Ala Lys Gly Pro Thr Thr Lys Ser Asp Gly Asn Arg Glu Lys Ile
100 105 110

Asp Val Met Gly Leu Leu Thr Gly Leu Ile Ala Ala Gly Val Phe Leu
115 120 125

Val Ile Phe Gly Leu Leu Gly Tyr Tyr Leu Cys Ile Thr Lys Cys Asn
130 135 140

Arg Leu Gln His Pro Cys Ser Ser Ala Val Tyr Glu Arg Gly Arg His
145 150 155 160

Thr Pro Ser Ile Ile Phe Arg Arg Pro Glu Glu Ala Ala Leu Ser Pro
165 170 175

Leu Pro Pro Ser Val Glu Asp Ala Gly Leu Pro Ser Tyr Glu Gln Ala
180 185 190

Val Ala Leu Thr Arg Lys His Ser Val Ser Pro Pro Pro Tyr Pro
195 200 205

Gly His Thr Lys Gly Phe Arg Val Phe Lys Lys Ser Met Ser Leu Pro
210 215 220

Ser His
225

<210> 311

<211> 17

<212> PRT

<213> Homo sapiens

<400> 311

Met Phe Thr Leu Leu Val Leu Leu Ser Gln Leu Pro Thr Val Thr Leu
1 5 10 15

Gly

<210> 312

<211> 209
<212> PRT
<213> Homo sapiens

<400> 312

Phe Pro His Cys Ala Arg Gly Pro Lys Ala Ser Lys His Ala Gly Glu
1 5 10 15
Glu Val Phe Thr Ser Lys Glu Glu Ala Asn Phe Phe Ile His Arg Arg
20 25 30
Leu Leu Tyr Asn Arg Phe Asp Leu Glu Leu Phe Thr Pro Gly Asn Leu
35 40 45
Glu Arg Glu Cys Asn Glu Glu Leu Cys Asn Tyr Glu Glu Ala Arg Glu
50 55 60
Ile Phe Val Asp Glu Asp Lys Thr Ile Ala Phe Trp Gln Glu Tyr Ser
65 70 75 80
Ala Lys Gly Pro Thr Thr Lys Ser Asp Gly Asn Arg Glu Lys Ile Asp
85 90 95
Val Met Gly Leu Leu Thr Gly Leu Ile Ala Ala Gly Val Phe Leu Val
100 105 110
Ile Phe Gly Leu Leu Gly Tyr Tyr Leu Cys Ile Thr Lys Cys Asn Arg
115 120 125
Leu Gln His Pro Cys Ser Ser Ala Val Tyr Glu Arg Gly Arg His Thr
130 135 140
Pro Ser Ile Ile Phe Arg Arg Pro Glu Glu Ala Ala Leu Ser Pro Leu
145 150 155 160
Pro Pro Ser Val Glu Asp Ala Gly Leu Pro Ser Tyr Glu Gln Ala Val
165 170 175
Ala Leu Thr Arg Lys His Ser Val Ser Pro Pro Pro Tyr Pro Gly
180 185 190
His Thr Lys Gly Phe Arg Val Phe Lys Lys Ser Met Ser Leu Pro Ser
195 200 205
His

<210> 313
 <211> 96
 <212> PRT
 <213> Homo sapiens

<400> 313
 Phe Pro His Cys Ala Arg Gly Pro Lys Ala Ser Lys His Ala Gly Glu
 1 5 10 15
 Glu Val Phe Thr Ser Lys Glu Glu Ala Asn Phe Phe Ile His Arg Arg
 20 25 30
 Leu Leu Tyr Asn Arg Phe Asp Leu Glu Leu Phe Thr Pro Gly Asn Leu
 35 40 45
 Glu Arg Glu Cys Asn Glu Glu Leu Cys Asn Tyr Glu Glu Ala Arg Glu
 50 55 60
 Ile Phe Val Asp Glu Asp Lys Thr Ile Ala Phe Trp Gln Glu Tyr Ser
 65 70 75 80
 Ala Lys Gly Pro Thr Thr Lys Ser Asp Gly Asn Arg Glu Lys Ile Asp
 85 90 95

<210> 314
 <211> 25
 <212> PRT
 <213> Homo sapiens

<400> 314
 Val Met Gly Leu Leu Thr Gly Leu Ile Ala Ala Gly Val Phe Leu Val
 1 5 10 15
 Ile Phe Gly Leu Leu Gly Tyr Tyr Leu
 20 25

<210> 315
 <211> 88
 <212> PRT
 <213> Homo sapiens

<400> 315
 Cys Ile Thr Lys Cys Asn Arg Leu Gln His Pro Cys Ser Ser Ala Val

1	5	10	15												
Tyr	Glu	Arg	Gly	Arg	His	Thr	Pro	Ser	Ile	Ile	Phe	Arg	Arg	Pro	Glu
			20					25					30		
Glu	Ala	Ala	Leu	Ser	Pro	Leu	Pro	Pro	Ser	Val	Glu	Asp	Ala	Gly	Leu
		35					40					45			
Pro	Ser	Tyr	Glu	Gln	Ala	Val	Ala	Leu	Thr	Arg	Lys	His	Ser	Val	Ser
		50					55				60				
Pro	Pro	Pro	Pro	Tyr	Pro	Gly	His	Thr	Lys	Gly	Phe	Arg	Val	Phe	Lys
	65					70				75					80
Lys	Ser	Met	Ser	Leu	Pro	Ser	His								
				85											

<210> 316
 <400> 316
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<210> 317
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<210> 324
 <211> 1432
 <212> DNA
 <213> Homo sapiens

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 tgccgcgcgc ggccgcgctg gggctcctgc cgcttctgct gctgctgccg cccgcgccgg 180
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 aggggatggg ggacaccgca aagaagaact ttggcggcgg gaacacggct tgggaggaaa 300
 agacgctgtc caagtacgag tccagcgaga ttgcctgct ggagatcctg gaggggctgt 360
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<210> 325
 <211> 1059
 <212> DNA
 <213> Homo sapiens

<400> 325

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tttaaccagg ggatggtgga caccgcaaag aagaactttg gcggcgggaa cacggcttgg 180
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cagggcggat cccagaggcc ctgcagcggg aatggccact gcagcggaga tgggagcaga 480
cagggcgacg ggtcctgccc gtgccacatg gggtagcagg gcccgctgtg cactgactgc 540
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<210> 326

<211> 353

<212> PRT

<213> Homo sapiens

<400> 326

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Met Arg Leu Pro Arg Arg Ala Ala Leu Gly Leu Leu Pro Leu Leu Leu
  1                   5                   10                   15

```

```

Leu Leu Pro Pro Ala Pro Glu Ala Ala Lys Lys Pro Thr Pro Cys His
      20                   25                   30

```

```

Arg Cys Arg Gly Leu Val Asp Lys Phe Asn Gln Gly Met Val Asp Thr
      35                   40                   45

```

```

Ala Lys Lys Asn Phe Gly Gly Gly Asn Thr Ala Trp Glu Glu Lys Thr
      50                   55                   60

```

```

Leu Ser Lys Tyr Glu Ser Ser Glu Ile Arg Leu Leu Glu Ile Leu Glu
      65                   70                   75                   80

```

```

Gly Leu Cys Glu Ser Ser Asp Phe Glu Cys Asn Gln Met Leu Glu Ala
      85                   90                   95

```

```

Gln Glu Glu His Leu Glu Ala Trp Trp Leu Gln Leu Lys Ser Glu Tyr
      100                   105                   110

```

```

Pro Asp Leu Phe Glu Trp Phe Cys Val Lys Thr Leu Lys Val Cys Cys

```

115	120	125
Ser Pro Gly Thr Tyr Gly Pro Asp Cys Leu Ala Cys Gln Gly Gly Ser		
130	135	140
Gln Arg Pro Cys Ser Gly Asn Gly His Cys Ser Gly Asp Gly Ser Arg		
145	150	155
		160
Gln Gly Asp Gly Ser Cys Arg Cys His Met Gly Tyr Gln Gly Pro Leu		
	165	170
		175
Cys Thr Asp Cys Met Asp Gly Tyr Phe Ser Ser Leu Arg Asn Glu Thr		
	180	185
		190
His Ser Ile Cys Thr Ala Cys Asp Glu Ser Cys Lys Thr Cys Ser Gly		
	195	200
		205
Leu Thr Asn Arg Asp Cys Gly Glu Cys Glu Val Gly Trp Val Leu Asp		
	210	215
		220
Glu Gly Ala Cys Val Asp Val Asp Glu Cys Ala Ala Glu Pro Pro Pro		
225	230	235
		240
Cys Ser Ala Ala Gln Phe Cys Lys Asn Ala Asn Gly Ser Tyr Thr Cys		
	245	250
		255
Glu Glu Cys Asp Ser Ser Cys Val Gly Cys Thr Gly Glu Gly Pro Gly		
	260	265
		270
Asn Cys Lys Glu Cys Ile Ser Gly Tyr Ala Arg Glu His Gly Gln Cys		
	275	280
		285
Ala Asp Val Asp Glu Cys Ser Leu Ala Glu Lys Thr Cys Val Arg Lys		
	290	295
		300
Asn Glu Asn Cys Tyr Asn Thr Pro Gly Ser Tyr Val Cys Val Cys Pro		
305	310	315
		320
Asp Gly Phe Glu Glu Thr Glu Asp Ala Cys Val Pro Pro Ala Glu Ala		
	325	330
		335
Glu Ala Thr Glu Gly Glu Ser Pro Thr Gln Leu Pro Ser Arg Glu Asp		
	340	345
		350
Leu		

<210> 327

<211> 24

<212> PRT

<213> Homo sapiens

<400> 327

Met Arg Leu Pro Arg Arg Ala Ala Leu Gly Leu Leu Pro Leu Leu Leu
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Leu Leu Pro Pro Ala Pro Glu Ala
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<210> 328

<211> 329

<212> PRT

<213> Homo sapiens

<400> 328

Ala Lys Lys Pro Thr Pro Cys His Arg Cys Arg Gly Leu Val Asp Lys
1 5 10 15

Phe Asn Gln Gly Met Val Asp Thr Ala Lys Lys Asn Phe Gly Gly Gly
20 25 30

Asn Thr Ala Trp Glu Glu Lys Thr Leu Ser Lys Tyr Glu Ser Ser Glu
35 40 45

Ile Arg Leu Leu Glu Ile Leu Glu Gly Leu Cys Glu Ser Ser Asp Phe
50 55 60

Glu Cys Asn Gln Met Leu Glu Ala Gln Glu Glu His Leu Glu Ala Trp
65 70 75 80

Trp Leu Gln Leu Lys Ser Glu Tyr Pro Asp Leu Phe Glu Trp Phe Cys
85 90 95

Val Lys Thr Leu Lys Val Cys Cys Ser Pro Gly Thr Tyr Gly Pro Asp
100 105 110

Cys Leu Ala Cys Gln Gly Gly Ser Gln Arg Pro Cys Ser Gly Asn Gly
115 120 125

His Cys Ser Gly Asp Gly Ser Arg Gln Gly Asp Gly Ser Cys Arg Cys
130 135 140

His Met Gly Tyr Gln Gly Pro Leu Cys Thr Asp Cys Met Asp Gly Tyr
145 150 155 160

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aaaaaaaaaa aaaaaaaaaa gggcgccgc 2730

<210> 330

<211> 2013

<212> DNA

<213> Homo sapiens

<400> 330

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<210> 331

<211> 671

<212> PRT

<213> Homo sapiens

<400> 331

Met Ala Gln Leu Phe Leu Pro Leu Leu Ala Ala Leu Val Leu Ala Gln
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Ala Pro Ala Ala Leu Ala Asp Val Leu Glu Gly Asp Ser Ser Glu Asp
 20 25 30

Arg Ala Phe Arg Val Arg Ile Ala Gly Asp Ala Pro Leu Gln Gly Val

545 550 555 560

Glu Ala Arg Glu Val Gly Glu Ala Thr Gly Gly Pro Glu Leu Ser Gly
565 570 575

Val Pro Arg Gly Glu Ser Glu Glu Thr Gly Ser Ser Glu Gly Ala Pro
580 585 590

Ser Leu Leu Pro Ala Thr Arg Ala Pro Glu Gly Thr Arg Glu Leu Glu
595 600 605

Ala Pro Ser Glu Asp Asn Ser Gly Arg Thr Ala Pro Ala Gly Thr Ser
610 615 620

Val Gln Ala Gln Pro Val Leu Pro Thr Asp Ser Ala Ser Arg Gly Gly
625 630 635 640

Val Ala Val Val Pro Ala Ser Gly Asn Ser Ala Gln Gly Ser Thr Ala
645 650 655

Leu Ser Ile Leu Leu Leu Phe Phe Pro Leu Gln Leu Trp Val Thr
660 665 670

<210> 332

<211> 22

<212> PRT

<213> Homo sapiens

<400> 332

Met Ala Gln Leu Phe Leu Pro Leu Leu Ala Ala Leu Val Leu Ala Gln
1 5 10 15

Ala Pro Ala Ala Leu Ala
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<210> 333

<211> 649

<212> PRT

<213> Homo sapiens

<400> 333

Asp Val Leu Glu Gly Asp Ser Ser Glu Asp Arg Ala Phe Arg Val Arg
1 5 10 15

Ile Ala Gly Asp Ala Pro Leu Gln Gly Val Leu Gly Gly Ala Leu Thr
20 25 30

Ile Pro Cys His Val His Tyr Leu Arg Pro Pro Pro Ser Arg Arg Ala
 35 40 45

Val Leu Gly Ser Pro Arg Val Lys Trp Thr Phe Leu Ser Arg Gly Arg
 50 55 60

Glu Ala Glu Val Leu Val Ala Arg Gly Val Arg Val Lys Val Asn Glu
 65 70 75 80

Ala Tyr Arg Phe Arg Val Ala Leu Pro Ala Tyr Pro Ala Ser Leu Thr
 85 90 95

Asp Val Ser Leu Ala Leu Ser Glu Leu Arg Pro Asn Asp Ser Gly Ile
 100 105 110

Tyr Arg Cys Glu Val Gln His Gly Ile Asp Asp Ser Ser Asp Ala Val
 115 120 125

Glu Val Lys Val Lys Gly Val Val Phe Leu Tyr Arg Glu Gly Ser Ala
 130 135 140

Arg Tyr Ala Phe Ser Phe Ser Gly Ala Gln Glu Ala Cys Ala Arg Ile
 145 150 155 160

Gly Ala His Ile Ala Thr Pro Glu Gln Leu Tyr Ala Ala Tyr Leu Gly
 165 170 175

Gly Tyr Glu Gln Cys Asp Ala Gly Trp Leu Ser Asp Gln Thr Val Arg
 180 185 190

Tyr Pro Ile Gln Thr Pro Arg Glu Ala Cys Tyr Gly Asp Met Asp Gly
 195 200 205

Phe Pro Gly Val Arg Asn Tyr Gly Val Val Asp Pro Asp Asp Leu Tyr
 210 215 220

Asp Val Tyr Cys Tyr Ala Glu Asp Leu Asn Gly Glu Leu Phe Leu Gly
 225 230 235 240

Asp Pro Pro Glu Lys Leu Thr Leu Glu Glu Ala Arg Ala Tyr Cys Gln
 245 250 255

Glu Arg Gly Ala Glu Ile Ala Thr Thr Gly Gln Leu Tyr Ala Ala Trp
 260 265 270

Asp Gly Gly Leu Asp His Cys Ser Pro Gly Trp Leu Ala Asp Gly Ser
 275 280 285

Val	Arg	Tyr	Pro	Ile	Val	Thr	Pro	Ser	Gln	Arg	Cys	Gly	Gly	Gly	Leu	290	295	300	
Pro	Gly	Val	Lys	Thr	Leu	Phe	Leu	Phe	Pro	Asn	Gln	Thr	Gly	Phe	Pro	305	310	315	320
Asn	Lys	His	Ser	Arg	Phe	Asn	Val	Tyr	Cys	Phe	Arg	Asp	Ser	Ala	Gln	325	330	335	
Pro	Ser	Ala	Ile	Pro	Glu	Ala	Ser	Asn	Pro	Ala	Ser	Asn	Pro	Ala	Ser	340	345	350	
Asp	Gly	Leu	Glu	Ala	Ile	Val	Thr	Val	Thr	Glu	Thr	Leu	Glu	Glu	Leu	355	360	365	
Gln	Leu	Pro	Gln	Glu	Ala	Thr	Glu	Ser	Glu	Ser	Arg	Gly	Ala	Ile	Tyr	370	375	380	
Ser	Ile	Pro	Ile	Met	Glu	Asp	Gly	Gly	Gly	Gly	Ser	Ser	Thr	Pro	Glu	385	390	395	400
Asp	Pro	Ala	Glu	Ala	Pro	Arg	Thr	Leu	Leu	Glu	Phe	Glu	Thr	Gln	Ser	405	410	415	
Met	Val	Pro	Pro	Thr	Gly	Phe	Ser	Glu	Glu	Glu	Gly	Lys	Ala	Leu	Glu	420	425	430	
Glu	Glu	Glu	Lys	Tyr	Glu	Asp	Glu	Glu	Glu	Lys	Glu	Glu	Glu	Glu	Glu	435	440	445	
Glu	Glu	Glu	Val	Glu	Asp	Glu	Ala	Leu	Trp	Ala	Trp	Pro	Ser	Glu	Leu	450	455	460	
Ser	Ser	Pro	Gly	Pro	Glu	Ala	Ser	Leu	Pro	Thr	Glu	Pro	Ala	Ala	Gln	465	470	475	480
Glu	Lys	Ser	Leu	Ser	Gln	Ala	Pro	Ala	Arg	Ala	Val	Leu	Gln	Pro	Gly	485	490	495	
Ala	Ser	Pro	Leu	Pro	Asp	Gly	Glu	Ser	Glu	Ala	Ser	Arg	Pro	Pro	Arg	500	505	510	
Val	His	Gly	Pro	Pro	Thr	Glu	Thr	Leu	Pro	Thr	Pro	Arg	Glu	Arg	Asn	515	520	525	
Leu	Ala	Ser	Pro	Ser	Pro	Ser	Thr	Leu	Val	Glu	Ala	Arg	Glu	Val	Gly	530	535	540	

Glu Ala Thr Gly Gly Pro Glu Leu Ser Gly Val Pro Arg Gly Glu Ser
545 550 555 560

Glu Glu Thr Gly Ser Ser Glu Gly Ala Pro Ser Leu Leu Pro Ala Thr
565 570 575

Arg Ala Pro Glu Gly Thr Arg Glu Leu Glu Ala Pro Ser Glu Asp Asn
580 585 590

Ser Gly Arg Thr Ala Pro Ala Gly Thr Ser Val Gln Ala Gln Pro Val
595 600 605

Leu Pro Thr Asp Ser Ala Ser Arg Gly Gly Val Ala Val Val Pro Ala
610 615 620

Ser Gly Asn Ser Ala Gln Gly Ser Thr Ala Leu Ser Ile Leu Leu Leu
625 630 635 640

Phe Phe Pro Leu Gln Leu Trp Val Thr
645

<210> 334

<211> 456

<212> PRT

<213> Pigeon pea witches'-broom phytoplasma

<400> 334

Met Asn Leu Asp Ile His Cys Glu Gln Leu Ser Asp Ala Arg Trp Thr
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Glu Leu Leu Pro Leu Leu Gln Gln Tyr Glu Val Val Arg Leu Asp Asp
20 25 30

Cys Gly Leu Thr Glu Glu His Cys Lys Asp Ile Gly Ser Ala Leu Arg
35 40 45

Ala Asn Pro Ser Leu Thr Glu Leu Cys Leu Arg Thr Asn Glu Leu Gly
50 55 60

Asp Ala Gly Val His Leu Val Leu Gln Gly Leu Gln Ser Pro Thr Cys
65 70 75 80

Lys Ile Gln Lys Leu Ser Leu Gln Asn Cys Ser Leu Thr Glu Ala Gly
85 90 95

Cys Gly Val Leu Pro Ser Thr Leu Arg Ser Leu Pro Thr Leu Arg Glu

100	105	110
Leu His Leu Ser Asp Asn Pro Leu Gly Asp Ala Gly Leu Arg Leu Leu		
115	120	125
Cys Glu Gly Leu Leu Asp Pro Gln Cys His Leu Glu Lys Leu Gln Leu		
130	135	140
Glu Tyr Cys Arg Leu Thr Ala Ala Ser Cys Glu Pro Leu Ala Ser Val		
145	150	155 160
Leu Arg Ala Thr Arg Ala Leu Lys Glu Leu Thr Val Ser Asn Asn Asp		
	165	170 175
Ile Gly Glu Ala Gly Ala Arg Val Leu Gly Gln Gly Leu Ala Asp Ser		
	180	185 190
Ala Cys Gln Leu Glu Thr Leu Arg Leu Glu Asn Cys Gly Leu Thr Pro		
	195	200 205
Ala Asn Cys Lys Asp Leu Cys Gly Ile Val Ala Ser Gln Ala Ser Leu		
	210	215 220
Arg Glu Leu Asp Leu Gly Ser Asn Gly Leu Gly Asp Ala Gly Ile Ala		
225	230	235 240
Glu Leu Cys Pro Gly Leu Leu Ser Pro Ala Ser Arg Leu Lys Thr Leu		
	245	250 255
Trp Leu Trp Glu Cys Asp Ile Thr Ala Ser Gly Cys Arg Asp Leu Cys		
	260	265 270
Arg Val Leu Gln Ala Lys Glu Thr Leu Lys Glu Leu Ser Leu Ala Gly		
	275	280 285
Asn Lys Leu Gly Asp Glu Gly Ala Arg Leu Leu Cys Glu Ser Leu Leu		
	290	295 300
Gln Pro Gly Cys Gln Leu Glu Ser Leu Trp Val Lys Ser Cys Ser Leu		
305	310	315 320
Thr Ala Ala Cys Cys Gln His Val Ser Leu Met Leu Thr Gln Asn Lys		
	325	330 335
His Leu Leu Glu Leu Gln Leu Ser Ser Asn Lys Leu Gly Asp Ser Gly		
	340	345 350
Ile Gln Glu Leu Cys Gln Ala Leu Ser Gln Pro Gly Thr Thr Leu Arg		

355

360

365

Val Leu Cys Leu Gly Asp Cys Glu Val Thr Asn Ser Gly Cys Ser Ser
370 375 380

Leu Ala Ser Leu Leu Leu Ala Asn Arg Ser Leu Arg Glu Leu Asp Leu
385 390 395 400

Ser Asn Asn Cys Val Gly Asp Pro Gly Val Leu Gln Leu Leu Gly Ser
405 410 415

Leu Glu Gln Pro Gly Cys Ala Leu Glu Gln Leu Val Leu Tyr Asp Thr
420 425 430

Tyr Trp Thr Glu Glu Val Glu Asp Arg Leu Gln Ala Leu Glu Gly Ser
435 440 445

Lys Pro Gly Leu Arg Val Ile Ser
450 455

<210> 335

<211> 834

<212> PRT

<213> Mus sp.

<400> 335

Met Ala Pro His Trp Ala Val Trp Leu Leu Ala Ala Gly Leu Trp Gly
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Leu Gly Ile Gly Ala Glu Met Trp Trp Asn Leu Val Pro Arg Lys Thr
20 25 30

Val Ser Ser Gly Glu Leu Val Thr Val Val Arg Arg Phe Ser Gln Thr
35 40 45

Gly Ile Gln Asp Phe Leu Thr Leu Thr Leu Thr Glu His Ser Gly Leu
50 55 60

Leu Tyr Val Gly Ala Arg Glu Ala Leu Phe Ala Phe Ser Val Glu Ala
65 70 75 80

Leu Glu Leu Gln Gly Ala Ile Ser Trp Glu Ala Pro Ala Glu Lys Lys
85 90 95

Ile Glu Cys Thr Gln Lys Gly Lys Ser Asn Gln Thr Glu Cys Phe Asn
100 105 110

Ser Cys Ile Asn Asn Trp His Arg Asp Asn Gly Tyr Thr Ser Ser Leu
 370 375 380

Glu Leu Pro Asp Asn Thr Leu Asn Phe Ile Lys Lys His Pro Leu Met
 385 390 395 400

Glu Asp Gln Val Lys Pro Arg Leu Gly Arg Pro Leu Leu Val Lys Lys
 405 410 415

Asn Thr Asn Phe Thr His Val Val Ala Asp Arg Val Pro Gly Leu Asp
 420 425 430

Gly Ala Thr Tyr Thr Val Leu Phe Ile Gly Thr Gly Asp Gly Trp Leu
 435 440 445

Leu Lys Ala Val Ser Leu Gly Pro Trp Ile His Met Val Glu Glu Leu
 450 455 460

Gln Val Phe Asp Gln Glu Pro Val Glu Ser Leu Val Leu Ser Gln Ser
 465 470 475 480

Lys Lys Val Leu Phe Ala Gly Ser Arg Ser Gln Leu Val Gln Leu Ser
 485 490 495

Leu Ala Asp Cys Thr Lys Tyr Arg Phe Cys Val Asp Cys Val Leu Ala
 500 505 510

Arg Asp Pro Tyr Cys Ala Trp Asn Val Asn Thr Ser Arg Cys Val Ala
 515 520 525

Thr Thr Ser Gly Arg Ser Gly Ser Phe Leu Val Gln His Val Ala Asn
 530 535 540

Leu Asp Thr Ser Lys Met Cys Asn Gln Tyr Gly Ile Lys Lys Val Arg
 545 550 555 560

Ser Ile Pro Lys Asn Ile Thr Val Val Ser Gly Thr Asp Leu Val Leu
 565 570 575

Pro Cys His Leu Ser Ser Asn Leu Ala His Ala His Trp Thr Phe Gly
 580 585 590

Ser Gln Asp Leu Pro Ala Glu Gln Pro Gly Ser Phe Leu Tyr Asp Thr
 595 600 605

Gly Leu Gln Ala Leu Val Val Met Ala Ala Gln Ser Arg His Ser Gly
 610 615 620

Pro Tyr Arg Cys Tyr Ser Glu Glu Gln Gly Thr Arg Leu Ala Ala Glu
 625 630 635 640
 Ser Tyr Leu Val Ala Val Val Ala Gly Ser Ser Val Thr Leu Glu Ala
 645 650 655
 Arg Ala Pro Leu Glu Asn Leu Gly Leu Val Trp Leu Ala Val Val Ala
 660 665 670
 Leu Gly Ala Val Cys Leu Val Leu Leu Leu Val Leu Ser Leu Arg
 675 680 685
 Arg Arg Leu Arg Glu Glu Leu Glu Lys Gly Ala Lys Ala Ser Glu Arg
 690 695 700
 Thr Leu Val Tyr Pro Leu Glu Leu Pro Lys Glu Pro Ala Ser Pro Pro
 705 710 715 720
 Phe Arg Pro Gly Pro Glu Thr Asp Glu Lys Leu Trp Asp Pro Val Gly
 725 730 735
 Tyr Tyr Tyr Ser Asp Gly Ser Leu Lys Ile Val Pro Gly His Ala Arg
 740 745 750
 Cys Gln Pro Gly Gly Gly Pro Pro Ser Pro Pro Pro Gly Ile Pro Gly
 755 760 765
 Gln Pro Leu Pro Ser Pro Thr Arg Leu His Leu Gly Gly Gly Arg Asn
 770 775 780
 Ser Asn Ala Asn Gly Tyr Val Arg Leu Gln Leu Gly Gly Glu Asp Arg
 785 790 795 800
 Gly Gly Ser Gly His Pro Leu Pro Glu Leu Ala Asp Glu Leu Arg Arg
 805 810 815
 Lys Leu Gln Gln Arg Gln Pro Leu Pro Asp Ser Asn Pro Glu Glu Ser
 820 825 830
 Ser Val

<210> 336
 <211> 3503
 <212> DNA
 <213> Mus sp.

<400> 336

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<210> 337

<400> 337

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<210> 338

<400> 338

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<210> 339

<211> 348

<212> PRT

<213> *Cricetulus griseus*

<400> 339

Met His Leu Pro Pro Ala Ala Ala Val Gly Leu Leu Leu Leu Leu Leu
 1 5 10 15

Pro Pro Pro Ala Arg Val Ala Ser Arg Lys Pro Thr Met Cys Gln Arg
 20 25 30

Cys Arg Ala Leu Val Asp Lys Phe Asn Gln Gly Met Ala Asn Thr Ala
 35 40 45

Arg Lys Asn Phe Gly Gly Gly Asn Thr Ala Trp Glu Glu Lys Ser Leu
 50 55 60

Ser Lys Tyr Glu Phe Ser Glu Ile Arg Leu Leu Glu Ile Met Glu Gly
 65 70 75 80

Leu Cys Asp Ser Asn Asp Phe Glu Cys Asn Gln Leu Leu Glu Gln His
 85 90 95

100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175 180 185 190 195 200 205 210 215 220 225 230 235 240 245 250 255 260 265 270 275 280 285 290 295 300 305 310 315 320 325 330 335 340 345

Glu	Glu	Gln	Leu	Glu	Ala	Trp	Trp	Gln	Thr	Leu	Lys	Lys	Glu	Cys	Pro	100	105	110
Asn	Leu	Phe	Glu	Trp	Phe	Cys	Val	His	Thr	Leu	Lys	Ala	Cys	Cys	Leu	115	120	125
Pro	Gly	Thr	Tyr	Gly	Pro	Asp	Cys	Gln	Glu	Cys	Gln	Gly	Gly	Ser	Gln	130	135	140
Arg	Pro	Cys	Ser	Gly	Asn	Gly	His	Cys	Asp	Gly	Asp	Gly	Ser	Arg	Gln	145	150	155 160
Gly	Asp	Gly	Ser	Cys	Gln	Cys	His	Val	Gly	Tyr	Lys	Gly	Pro	Leu	Cys	165	170	175
Ile	Asp	Cys	Met	Asp	Gly	Tyr	Phe	Ser	Leu	Leu	Arg	Asn	Glu	Thr	His	180	185	190
Ser	Phe	Cys	Thr	Ala	Cys	Asp	Glu	Ser	Cys	Lys	Thr	Cys	Ser	Gly	Pro	195	200	205
Thr	Asn	Lys	Gly	Cys	Val	Glu	Cys	Glu	Val	Gly	Trp	Thr	Arg	Val	Glu	210	215	220
Asp	Ala	Cys	Val	Asp	Val	Asp	Glu	Cys	Ala	Ala	Glu	Thr	Pro	Pro	Cys	225	230	235 240
Ser	Asn	Val	Gln	Tyr	Cys	Glu	Asn	Val	Asn	Gly	Ser	Tyr	Thr	Cys	Glu	245	250	255
Glu	Cys	Asp	Ser	Thr	Cys	Val	Gly	Cys	Thr	Gly	Lys	Gly	Pro	Ala	Asn	260	265	270
Cys	Lys	Glu	Cys	Ile	Ser	Gly	Tyr	Ser	Lys	Gln	Lys	Gly	Glu	Cys	Ala	275	280	285
Asp	Ile	Asp	Glu	Cys	Ser	Leu	Glu	Thr	Lys	Val	Cys	Lys	Lys	Glu	Asn	290	295	300
Glu	Asn	Cys	Tyr	Asn	Thr	Pro	Gly	Ser	Phe	Val	Cys	Val	Cys	Pro	Glu	305	310	315 320
Gly	Phe	Glu	Glu	Asp	Arg	Arg	Cys	Leu	Cys	Thr	Asp	Ser	Arg	Arg	Arg	325	330	335
Ser	Gly	Arg	Gly	Lys	Ser	His	Thr	Ala	Thr	Leu	Pro					340	345	

<210> 340
 <211> 1399
 <212> DNA
 <213> *Cricetulus griseus*

<400> 340
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<210> 341
 <211> 528
 <212> PRT
 <213> *Homo sapiens*

<400> 341
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 20 25 30
 Arg Ala Phe Arg Val Arg Ile Ala Gly Asp Ala Pro Leu Gln Gly Val
 35 40 45

Leu Gly Gly Ala Leu Thr Ile Pro Cys His Val His Tyr Leu Arg Pro
 50 55 60
 Pro Pro Ser Arg Arg Ala Val Leu Gly Ser Pro Arg Val Lys Trp Thr
 65 70 75 80
 Phe Leu Ser Arg Gly Arg Glu Ala Glu Val Leu Val Ala Arg Gly Val
 85 90 95
 Arg Val Lys Val Asn Glu Ala Tyr Arg Phe Arg Val Ala Leu Pro Ala
 100 105 110
 Tyr Pro Ala Ser Leu Thr Asp Val Ser Leu Ala Leu Ser Glu Leu Arg
 115 120 125
 Pro Asn Asp Ser Gly Ile Tyr Arg Cys Glu Val Gln His Gly Ile Asp
 130 135 140
 Asp Ser Ser Asp Ala Val Glu Ser Ser Gln Arg Tyr Pro Ile Gln Thr
 145 150 155 160
 Pro Arg Glu Ala Cys Tyr Gly Asp Met Asp Gly Phe Pro Gly Val Arg
 165 170 175
 Asn Tyr Gly Val Val Asp Pro Asp Asp Leu Tyr Asp Val Tyr Cys Tyr
 180 185 190
 Ala Glu Asp Leu Asn Gly Glu Leu Phe Leu Gly Asp Pro Pro Glu Lys
 195 200 205
 Leu Thr Leu Glu Glu Ala Arg Ala Tyr Cys Gln Glu Arg Gly Ala Glu
 210 215 220
 Ile Ala Thr Thr Gly Gln Leu Tyr Ala Ala Trp Asp Gly Gly Leu Asp
 225 230 235 240
 His Cys Ser Pro Gly Trp Leu Ala Asp Gly Ser Val Arg Tyr Pro Ile
 245 250 255
 Val Thr Pro Ser Gln Arg Cys Gly Gly Gly Leu Pro Gly Val Lys Thr
 260 265 270
 Leu Phe Leu Phe Pro Asn Gln Thr Gly Phe Pro Asn Lys His Ser Arg
 275 280 285
 Phe Asn Val Tyr Cys Phe Arg Asp Ser Ala Gln Leu Leu Pro Ser Leu
 290 295 300

Arg Pro Pro Thr Gln Pro Pro Thr Gln Leu Asp Gly Leu Glu Ala Ile
305 310 315 320

Val Thr Val Thr Glu Thr Leu Glu Glu Leu Gln Leu Pro Gln Glu Ala
325 330 335

Thr Glu Ser Glu Ser Arg Gly Ala Ile Tyr Ser Ile Pro Ile Met Glu
340 345 350

Asp Gly Gly Gly Gly Ser Ser Thr Pro Glu Asp Pro Ala Glu Ala Pro
355 360 365

Arg Thr Leu Leu Glu Phe Glu Thr Gln Ser Met Val Pro Pro Thr Gly
370 375 380

Phe Ser Glu Glu Glu Gly Lys Ala Leu Glu Glu Glu Glu Lys Tyr Glu
385 390 395 400

Asp Glu Glu Glu Lys Glu Glu Glu Glu Glu Glu Glu Glu Val Glu Asp
405 410 415

Glu Ala Leu Trp Ala Trp Pro Ser Glu Leu Ser Ser Pro Gly Pro Glu
420 425 430

Ala Ser Leu Pro Thr Glu Pro Ala Ala Gln Glu Glu Ser Leu Ser Gln
435 440 445

Ala Pro Ala Arg Ala Val Leu Gln Pro Gly Ala Ser Pro Leu Pro Asp
450 455 460

Gly Glu Ser Glu Ala Ser Arg Pro Pro Arg Val His Gly Pro Pro Thr
465 470 475 480

Glu Thr Leu Pro Thr Pro Arg Glu Arg Asn Leu Ala Ser Pro Ser Pro
485 490 495

Ser Thr Leu Val Glu Ala Arg Glu Val Gly Glu Ala Thr Gly Gly Pro
500 505 510

Glu Leu Ser Gly Val Pro Arg Gly Gly Ala Arg Thr Gln Phe Ala Leu
515 520 525

<210> 342

<211> 883

<212> PRT

<213> Mus sp.

<400> 342

Met Ile Pro Leu Leu Leu Ser Leu Leu Ala Ala Leu Val Leu Thr Gln
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Ala Pro Ala Ala Leu Ala Asp Asp Leu Lys Glu Asp Ser Ser Glu Asp
20 25 30

Arg Ala Phe Arg Val Arg Ile Gly Ala Ala Gln Leu Arg Gly Val Leu
35 40 45

Gly Gly Ala Leu Ala Ile Pro Cys His Val His His Leu Arg Pro Pro
50 55 60

Arg Ser Arg Arg Ala Ala Pro Gly Phe Pro Arg Val Lys Trp Thr Phe
65 70 75 80

Leu Ser Gly Asp Arg Glu Val Glu Val Leu Val Ala Arg Gly Leu Arg
85 90 95

Val Lys Val Asn Glu Ala Tyr Arg Phe Arg Val Ala Leu Pro Ala Tyr
100 105 110

Pro Ala Ser Leu Thr Asp Val Ser Leu Val Leu Ser Glu Leu Arg Pro
115 120 125

Asn Asp Ser Gly Val Tyr Arg Cys Glu Val Gln His Gly Ile Asp Asp
130 135 140

Ser Ser Asp Ala Val Glu Val Lys Val Lys Gly Val Val Phe Leu Tyr
145 150 155 160

Arg Glu Gly Ser Ala Arg Tyr Ala Phe Ser Phe Ala Gly Ala Gln Glu
165 170 175

Ala Cys Ala Arg Ile Gly Ala Arg Ile Ala Thr Pro Glu Gln Leu Tyr
180 185 190

Ala Ala Tyr Leu Gly Gly Tyr Glu Gln Cys Asp Ala Gly Trp Leu Ser
195 200 205

Asp Gln Thr Val Arg Tyr Pro Ile Gln Asn Pro Arg Glu Ala Cys Ser
210 215 220

Gly Asp Met Asp Gly Tyr Pro Gly Val Arg Asn Tyr Gly Val Val Gly
225 230 235 240

Ala	Gln	Ala	Val	Leu	Gln	Leu	Asp	Ala	Ser	Pro	Ser	Pro	Gly	Pro	Pro		
			500					505					510				
Arg	Phe	Arg	Gly	Pro	Pro	Ala	Glu	Thr	Leu	Leu	Pro	Pro	Arg	Glu	Trp		
		515					520					525					
Ser	Ala	Thr	Ser	Thr	Pro	Gly	Gly	Ala	Arg	Glu	Val	Gly	Gly	Glu	Thr		
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Gly	Ser	Pro	Glu	Leu	Ser	Gly	Val	Pro	Arg	Glu	Ser	Glu	Glu	Ala	Gly		
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Ser	Ser	Ser	Leu	Glu	Asp	Gly	Pro	Ser	Leu	Leu	Pro	Ala	Thr	Trp	Ala		
			565						570					575			
Pro	Val	Gly	Pro	Arg	Glu	Leu	Glu	Thr	Pro	Ser	Glu	Glu	Lys	Ser	Gly		
			580					585					590				
Arg	Thr	Val	Leu	Ala	Gly	Thr	Ser	Val	Gln	Ala	Gln	Pro	Val	Leu	Pro		
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Thr	Asp	Ser	Ala	Ser	His	Gly	Gly	Val	Ala	Val	Ala	Pro	Ser	Ser	Gly		
		610				615					620						
Asp	Cys	Ile	Pro	Ser	Pro	Cys	His	Asn	Gly	Gly	Thr	Cys	Leu	Glu	Glu		
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Lys	Glu	Gly	Phe	Arg	Cys	Leu	Cys	Leu	Pro	Gly	Tyr	Gly	Gly	Asp	Leu		
			645					650						655			
Cys	Asp	Val	Gly	Leu	His	Phe	Cys	Ser	Pro	Gly	Trp	Glu	Ala	Phe	Gln		
		660						665					670				
Gly	Ala	Cys	Tyr	Lys	His	Phe	Ser	Thr	Arg	Arg	Ser	Trp	Glu	Glu	Ala		
		675					680					685					
Glu	Ser	Gln	Cys	Arg	Ala	Leu	Gly	Ala	His	Leu	Thr	Ser	Ile	Cys	Thr		
		690				695					700						
Pro	Glu	Glu	Gln	Asp	Phe	Val	Asn	Asp	Arg	Tyr	Arg	Glu	Tyr	Gln	Trp		
705					710					715					720		
Ile	Gly	Leu	Asn	Asp	Arg	Thr	Ile	Glu	Gly	Asp	Phe	Leu	Trp	Ser	Asp		
			725					730						735			
Gly	Ala	Pro	Leu	Leu	Tyr	Glu	Asn	Trp	Asn	Pro	Gly	Gln	Pro	Asp	Ser		
		740						745					750				

Tyr Phe Leu Ser Gly Glu Asn Cys Val Val Met Val Trp His Asp Gln
755 760 765

Gly Gln Trp Ser Asp Val Pro Cys Asn Tyr His Leu Ser Tyr Thr Cys
770 775 780

Lys Met Gly Leu Val Ser Cys Gly Pro Pro Pro Gln Leu Pro Leu Ala
785 790 795 800

Gln Ile Phe Gly Arg Pro Arg Leu Arg Tyr Ala Val Asp Thr Val Leu
805 810 815

Arg Tyr Arg Cys Arg Asp Gly Leu Ala Gln Arg Asn Leu Pro Leu Ile
820 825 830

Arg Cys Gln Glu Asn Gly Leu Trp Glu Ala Pro Gln Ile Ser Cys Val
835 840 845

Pro Arg Arg Pro Gly Arg Ala Leu Arg Ser Met Asp Ala Pro Glu Gly
850 855 860

Pro Arg Gly Gln Leu Ser Arg His Arg Lys Ala Pro Leu Thr Pro Pro
865 870 875 880

Ser Ser Leu

<210> 343

<211> 3153

<212> DNA

<213> Mus sp.

<400> 343

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aataaagttg tctgaacca aagaaaaaa aaa 3153

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<400> 344
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<210> 350
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<210> 351
<211> 2002
<212> DNA
<213> Gerbil

<400> 351
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agaaggagtc tttgcatcaa aaaaagcagc aagcatcttt atgcacgctc gcctcctata 240
caatagattt gatttagaac tcttcaactcc cgggaacctg gagagagagt gctatgagga 300
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aggatttagg gtatttataaa agtcaatgtc actcccatct cactaagccc accttgccgc 780

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aaaaaaaaa aagggcggcc gc
2002

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<210> 352
 <211> 675
 <212> DNA
 <213> Gerbil

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<400> 352
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gcaagcatct ttatgcaccg tcgcctccta tacaatagat ttgatttaga actcttact 180
ccgggaacc tggagagaga gtgctatgag gagttctgta gttatgaaga agccagagag 240
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675

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<210> 353
 <211> 225
 <212> PRT
 <213> Gerbil

<400> 353

Met Phe Leu Leu Leu Val Val Leu Ser Gln Leu Pro Arg Leu Thr Leu
1 5 10 15

Ala Val Pro His Thr Arg Ser Leu Lys Asn Ser Glu His Ala Pro Glu
20 25 30

Gly Val Phe Ala Ser Lys Lys Ala Ala Ser Ile Phe Met His Arg Arg
35 40 45

Leu Leu Tyr Asn Arg Phe Asp Leu Glu Leu Phe Thr Pro Gly Asn Leu
50 55 60

Glu Arg Glu Cys Tyr Glu Glu Phe Cys Ser Tyr Glu Glu Ala Arg Glu
65 70 75 80

Ile Leu Gly Asp Asn Glu Glu Met Ile Thr Phe Trp Arg Glu Tyr Ser
85 90 95

Val Lys Gly Pro Thr Thr Arg Ser Asp Val Asn Lys Glu Lys Ile Asp
100 105 110

Val Met Gly Leu Leu Thr Gly Leu Ile Ala Ala Gly Val Phe Leu Val
115 120 125

Val Phe Gly Leu Leu Gly Tyr Tyr Leu Cys Ile Thr Lys Cys Asn Arg
130 135 140

Gln Pro Tyr Gln Gly Ser Ser Ala Val Tyr Thr Arg Arg Thr Arg His
145 150 155 160

Thr Pro Ser Ile Ile Phe Arg Thr His Glu Glu Ala Val Leu Ser Pro
165 170 175

Ser Ser Ser Ser Glu Asp Ala Gly Leu Pro Ser Tyr Glu Gln Ala Val
180 185 190

Ala Leu Thr Arg Lys His Ser Val Ser Pro Pro Pro Pro Tyr Pro Gly
195 200 205

Pro Ala Lys Gly Phe Arg Val Phe Lys Lys Ser Met Ser Leu Pro Ser
210 215 220

His
225

<210> 354

<211> 17
 <212> PRT
 <213> Gerbil

<400> 354
 Met Phe Leu Leu Leu Val Val Leu Ser Gln Leu Pro Arg Leu Thr Leu
 1 5 10 15
 Ala

<210> 355
 <211> 208
 <212> PRT
 <213> Gerbil

<400> 355
 Val Pro His Thr Arg Ser Leu Lys Asn Ser Glu His Ala Pro Glu Gly
 1 5 10 15
 Val Phe Ala Ser Lys Lys Ala Ala Ser Ile Phe Met His Arg Arg Leu
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 Leu Tyr Asn Arg Phe Asp Leu Glu Leu Phe Thr Pro Gly Asn Leu Glu
 35 40 45
 Arg Glu Cys Tyr Glu Glu Phe Cys Ser Tyr Glu Glu Ala Arg Glu Ile
 50 55 60
 Leu Gly Asp Asn Glu Glu Met Ile Thr Phe Trp Arg Glu Tyr Ser Val
 65 70 75 80
 Lys Gly Pro Thr Thr Arg Ser Asp Val Asn Lys Glu Lys Ile Asp Val
 85 90 95
 Met Gly Leu Leu Thr Gly Leu Ile Ala Ala Gly Val Phe Leu Val Val
 100 105 110
 Phe Gly Leu Leu Gly Tyr Tyr Leu Cys Ile Thr Lys Cys Asn Arg Gln
 115 120 125
 Pro Tyr Gln Gly Ser Ser Ala Val Tyr Thr Arg Arg Thr Arg His Thr
 130 135 140
 Pro Ser Ile Ile Phe Arg Thr His Glu Glu Ala Val Leu Ser Pro Ser
 145 150 155 160

Ser Ser Ser Glu Asp Ala Gly Leu Pro Ser Tyr Glu Gln Ala Val Ala
165 170 175

Leu Thr Arg Lys His Ser Val Ser Pro Pro Pro Pro Tyr Pro Gly Pro
180 185 190

Ala Lys Gly Phe Arg Val Phe Lys Lys Ser Met Ser Leu Pro Ser His
195 200 205

<210> 356
<211> 95
<212> PRT
<213> Gerbil

<400> 356
Val Pro His Thr Arg Ser Leu Lys Asn Ser Glu His Ala Pro Glu Gly
1 5 10 15

Val Phe Ala Ser Lys Lys Ala Ala Ser Ile Phe Met His Arg Arg Leu
20 25 30

Leu Tyr Asn Arg Phe Asp Leu Glu Leu Phe Thr Pro Gly Asn Leu Glu
35 40 45

Arg Glu Cys Tyr Glu Glu Phe Cys Ser Tyr Glu Glu Ala Arg Glu Ile
50 55 60

Leu Gly Asp Asn Glu Glu Met Ile Thr Phe Trp Arg Glu Tyr Ser Val
65 70 75 80

Lys Gly Pro Thr Thr Arg Ser Asp Val Asn Lys Glu Lys Ile Asp
85 90 95

<210> 357
<211> 25
<212> PRT
<213> Gerbil

<400> 357
Val Met Gly Leu Leu Thr Gly Leu Ile Ala Ala Gly Val Phe Leu Val
1 5 10 15

Val Phe Gly Leu Leu Gly Tyr Tyr Leu

20

25

<210> 358
<211> 88
<212> PRT
<213> Gerbil

<400> 358

Cys Ile Thr Lys Cys Asn Arg Gln Pro Tyr Gln Gly Ser Ser Ala Val
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Tyr Thr Arg Arg Thr Arg His Thr Pro Ser Ile Ile Phe Arg Thr His
20 25 30

Glu Glu Ala Val Leu Ser Pro Ser Ser Ser Glu Asp Ala Gly Leu
35 40 45

Pro Ser Tyr Glu Gln Ala Val Ala Leu Thr Arg Lys His Ser Val Ser
50 55 60

Pro Pro Pro Pro Tyr Pro Gly Pro Ala Lys Gly Phe Arg Val Phe Lys
65 70 75 80

Lys Ser Met Ser Leu Pro Ser His
85

<210> 359
<400> 359
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<210> 360
<400> 360
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<210> 361
<400> 361
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<210> 362
<211> 962
<212> DNA
<213> Mus sp.

<400> 362

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tgcttggtct ttaaggtgtc agagtccga gtgcgctttt ttgagcacag ccgggtcttc 300
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aaggccagtg tccacaagca tgtggtcttc ctggagccgg gcaagaaggg cctcaatggc 900
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aa 962

<210> 363

<211> 320

<212> PRT

<213> Mus sp.

<400> 363

Pro Phe Leu Phe Asn His Leu His Gly Leu Gly Leu Thr Arg Leu Arg
1 5 10 15
Thr Leu Asp Leu Ser Ser Asn Trp Leu Lys His Ile Ser Ile Pro Glu
20 25 30
Leu Ala Ala Leu Pro Thr Tyr Leu Lys Asn Arg Leu Tyr Leu His Asn
35 40 45
Asn Pro Leu Pro Cys Asp Cys Ser Leu Tyr His Leu Leu Arg Arg Trp
50 55 60
His Gln Arg Gly Leu Ser Ala Leu His Asp Phe Glu Arg Glu Tyr Thr
65 70 75 80
Cys Leu Val Phe Lys Val Ser Glu Ser Arg Val Arg Phe Phe Glu His
85 90 95
Ser Arg Val Phe Lys Asn Cys Ser Val Ala Ala Ala Pro Gly Leu Glu
100 105 110
Leu Pro Glu Glu Gln Leu His Ala Gln Val Gly Gln Ser Leu Arg Leu

Phe Cys Asn Thr Ser Val Pro Ala Thr Arg Val Ala Trp Val Ser Pro
 130 135 140
 Lys Asn Glu Leu Leu Val Ala Pro Ala Ser Gln Asp Gly Ser Ile Ala
 145 150 155 160
 Val Leu Ala Asp Gly Ser Leu Ala Ile Gly Arg Val Gln Glu Gln His
 165 170 175
 Ala Gly Val Phe Val Cys Leu Ala Ser Gly Pro Arg Leu His His Asn
 180 185 190
 Gln Thr Leu Glu Tyr Asn Val Ser Val Gln Lys Ala Arg Pro Glu Pro
 195 200 205
 Glu Thr Phe Asn Thr Gly Phe Thr Thr Leu Leu Gly Cys Ile Val Gly
 210 215 220
 Leu Val Leu Val Leu Leu Tyr Leu Phe Ala Pro Pro Cys Arg Gly Cys
 225 230 235 240
 Cys His Cys Cys Gln Arg Ala Cys Arg Asn Arg Cys Trp Pro Arg Ala
 245 250 255
 Ser Ser Pro Leu Gln Glu Leu Ser Ala Gln Ser Ser Met Leu Ser Thr
 260 265 270
 Thr Pro Pro Asp Ala Pro Ser Arg Lys Ala Ser Val His Lys His Val
 275 280 285
 Val Phe Leu Glu Pro Gly Lys Lys Gly Leu Asn Gly Arg Val Gln Leu
 290 295 300
 Ala Val Pro Pro Asp Ser Asp Leu Cys Asn Pro Met Gly Leu Gln Leu
 305 310 315 320

<210> 364
 <211> 16
 <212> PRT
 <213> Mus sp.
 <400> 364

Pro Phe Leu Phe Asn His Leu His Gly Leu Gly Leu Thr Arg Leu Arg
 1 5 10 15

<210> 365

<211> 304

<212> PRT

<213> Mus sp.

<400> 365

Thr Leu Asp Leu Ser Ser Asn Trp Leu Lys His Ile Ser Ile Pro Glu
 1 5 10 15

Leu Ala Ala Leu Pro Thr Tyr Leu Lys Asn Arg Leu Tyr Leu His Asn
 20 25 30

Asn Pro Leu Pro Cys Asp Cys Ser Leu Tyr His Leu Leu Arg Arg Trp
 35 40 45

His Gln Arg Gly Leu Ser Ala Leu His Asp Phe Glu Arg Glu Tyr Thr
 50 55 60

Cys Leu Val Phe Lys Val Ser Glu Ser Arg Val Arg Phe Phe Glu His
 65 70 75 80

Ser Arg Val Phe Lys Asn Cys Ser Val Ala Ala Ala Pro Gly Leu Glu
 85 90 95

Leu Pro Glu Glu Gln Leu His Ala Gln Val Gly Gln Ser Leu Arg Leu
 100 105 110

Phe Cys Asn Thr Ser Val Pro Ala Thr Arg Val Ala Trp Val Ser Pro
 115 120 125

Lys Asn Glu Leu Leu Val Ala Pro Ala Ser Gln Asp Gly Ser Ile Ala
 130 135 140

Val Leu Ala Asp Gly Ser Leu Ala Ile Gly Arg Val Gln Glu Gln His
 145 150 155 160

Ala Gly Val Phe Val Cys Leu Ala Ser Gly Pro Arg Leu His His Asn
 165 170 175

Gln Thr Leu Glu Tyr Asn Val Ser Val Gln Lys Ala Arg Pro Glu Pro
 180 185 190

Glu Thr Phe Asn Thr Gly Phe Thr Thr Leu Leu Gly Cys Ile Val Gly
 195 200 205

Leu Val Leu Val Leu Leu Tyr Leu Phe Ala Pro Pro Cys Arg Gly Cys
 210 215 220

Cys His Cys Cys Gln Arg Ala Cys Arg Asn Arg Cys Trp Pro Arg Ala
 225 230 235 240

Ser Ser Pro Leu Gln Glu Leu Ser Ala Gln Ser Ser Met Leu Ser Thr
 245 250 255

Thr Pro Pro Asp Ala Pro Ser Arg Lys Ala Ser Val His Lys His Val
 260 265 270

Val Phe Leu Glu Pro Gly Lys Lys Gly Leu Asn Gly Arg Val Gln Leu
 275 280 285

Ala Val Pro Pro Asp Ser Asp Leu Cys Asn Pro Met Gly Leu Gln Leu
 290 295 300

<210> 366

<211> 197

<212> PRT

<213> Mus sp.

<400> 366

Thr Leu Asp Leu Ser Ser Asn Trp Leu Lys His Ile Ser Ile Pro Glu
 1 5 10 15

Leu Ala Ala Leu Pro Thr Tyr Leu Lys Asn Arg Leu Tyr Leu His Asn
 20 25 30

Asn Pro Leu Pro Cys Asp Cys Ser Leu Tyr His Leu Leu Arg Arg Trp
 35 40 45

His Gln Arg Gly Leu Ser Ala Leu His Asp Phe Glu Arg Glu Tyr Thr
 50 55 60

Cys Leu Val Phe Lys Val Ser Glu Ser Arg Val Arg Phe Phe Glu His
 65 70 75 80

Ser Arg Val Phe Lys Asn Cys Ser Val Ala Ala Ala Pro Gly Leu Glu
 85 90 95

Leu Pro Glu Glu Gln Leu His Ala Gln Val Gly Gln Ser Leu Arg Leu

Phe Cys Asn Thr Ser Val Pro Ala Thr Arg Val Ala Trp Val Ser Pro
115 120 125

Lys Asn Glu Leu Leu Val Ala Pro Ala Ser Gln Asp Gly Ser Ile Ala
130 135 140

Val Leu Ala Asp Gly Ser Leu Ala Ile Gly Arg Val Gln Glu Gln His
145 150 155 160

Ala Gly Val Phe Val Cys Leu Ala Ser Gly Pro Arg Leu His His Asn
165 170 175

Gln Thr Leu Glu Tyr Asn Val Ser Val Gln Lys Ala Arg Pro Glu Pro
180 185 190

Glu Thr Phe Asn Thr
195

<210> 367

<211> 20

<212> PRT

<213> Mus sp.

<400> 367

Gly Phe Thr Thr Leu Leu Gly Cys Ile Val Gly Leu Val Leu Val Leu
1 5 10 15

Leu Tyr Leu Phe
20

<210> 368

<211> 87

<212> PRT

<213> Mus sp.

<400> 368

Ala Pro Pro Cys Arg Gly Cys Cys His Cys Cys Gln Arg Ala Cys Arg
1 5 10 15

Asn Arg Cys Trp Pro Arg Ala Ser Ser Pro Leu Gln Glu Leu Ser Ala
20 25 30

Gln Ser Ser Met Leu Ser Thr Thr Pro Pro Asp Ala Pro Ser Arg Lys
35 40 45

Ala Ser Val His Lys His Val Val Phe Leu Glu Pro Gly Lys Lys Gly
50 55 60

Leu Asn Gly Arg Val Gln Leu Ala Val Pro Pro Asp Ser Asp Leu Cys
65 70 75 80

Asn Pro Met Gly Leu Gln Leu
85

<210> 369
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:PCR Primer

<400> 369
attattcaga aggatgtccc gtgg 24

<210> 370
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:PCR Primer

<400> 370
cctcctgatt acotacaatg gtc 23

<210> 371
<211> 1656
<212> DNA
<213> Homo sapiens

<400> 371
gtcgaccac gcgctccgcc acgcgtccgg cccatggcgc cgcccgccgc ccgcctcgcc 60
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cccggaccog agtgtttcac agccaatggt gcggattata ggggaacaca gaactggaca 180
gcactacaag gcgggaagcc atgtctgttt tggaacgaga ctttcagca tccatacaac 240
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gatggagacg tgagcccctg gtgctatgtg gcagagcacg aggatggtgt ctactggaag 360
tactgtgaga tacctgcttg ccagatgcct ggaaaccttg gctgctacaa ggatcatgga 420

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ggggcctccc acatccactt cagcttcccc ctatttgaca tcagggactc ggccggacatg 840
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ctgccagggc aggcagagcc tggattcctc ctgctt
1656

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<210> 372

<211> 1425

<212> DNA

<213> Homo sapiens

<400> 372

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gattataggg gaacacagaa ctggacagca ctacaaggcg ggaagccatg tctgttttgg 180
aacgagactt tccagcatcc atacaacact ctgaaatacc ccaacgggga ggggggcctg 240
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gtcatacca ccagccccag ccaccacct cagactgtcc caggtagcaa ttcctgggcg 1140

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gaaatctgga gcatttttta caagccttcc acttcaattt ccatctttta gaagaaactc 1380
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<210> 373

<211> 475

<212> PRT

<213> Homo sapiens

<400> 373

Met Ala Pro Pro Ala Ala Arg Leu Ala Leu Leu Ser Ala Ala Ala Leu
1 5 10 15

Thr Leu Ala Ala Arg Pro Ala Pro Ser Pro Gly Leu Gly Pro Gly Pro
20 25 30

Glu Cys Phe Thr Ala Asn Gly Ala Asp Tyr Arg Gly Thr Gln Asn Trp
35 40 45

Thr Ala Leu Gln Gly Gly Lys Pro Cys Leu Phe Trp Asn Glu Thr Phe
50 55 60

Gln His Pro Tyr Asn Thr Leu Lys Tyr Pro Asn Gly Glu Gly Gly Leu
65 70 75 80

Gly Glu His Asn Tyr Cys Arg Asn Pro Asp Gly Asp Val Ser Pro Trp
85 90 95

Cys Tyr Val Ala Glu His Glu Asp Gly Val Tyr Trp Lys Tyr Cys Glu
100 105 110

Ile Pro Ala Cys Gln Met Pro Gly Asn Leu Gly Cys Tyr Lys Asp His
115 120 125

Gly Asn Pro Pro Pro Leu Thr Gly Thr Ser Lys Thr Ser Asn Lys Leu
130 135 140

Thr Ile Gln Thr Cys Ile Ser Phe Cys Arg Ser Gln Arg Phe Lys Phe
145 150 155 160

Ala Gly Met Glu Ser Gly Tyr Ala Cys Phe Cys Gly Asn Asn Pro Asp
165 170 175

Tyr Trp Lys Tyr Gly Glu Ala Ala Ser Thr Glu Cys Asn Ser Val Cys
180 185 190

Phe Gly Asp His Thr Gln Pro Cys Gly Gly Asp Gly Arg Ile Ile Leu
 195 200 205

Phe Asp Thr Leu Val Gly Ala Cys Gly Gly Asn Tyr Ser Ala Met Ser
 210 215 220

Ser Val Val Tyr Ser Pro Asp Phe Pro Asp Thr Tyr Ala Thr Gly Arg
 225 230 235 240

Val Cys Tyr Trp Thr Ile Arg Val Pro Gly Ala Ser His Ile His Phe
 245 250 255

Ser Phe Pro Leu Phe Asp Ile Arg Asp Ser Ala Asp Met Val Glu Leu
 260 265 270

Leu Asp Gly Tyr Thr His Arg Val Leu Ala Arg Phe His Gly Arg Ser
 275 280 285

Arg Pro Pro Leu Ser Phe Asn Val Ser Leu Asp Phe Val Ile Leu Tyr
 290 295 300

Phe Phe Ser Asp Arg Ile Asn Gln Ala Gln Gly Phe Ala Val Leu Tyr
 305 310 315 320

Gln Ala Val Lys Glu Glu Leu Pro Gln Glu Arg Pro Ala Val Asn Gln
 325 330 335

Thr Val Ala Glu Val Ile Thr Glu Gln Ala Asn Leu Ser Val Ser Ala
 340 345 350

Ala Arg Ser Ser Lys Val Leu Tyr Val Ile Thr Thr Ser Pro Ser His
 355 360 365

Pro Pro Gln Thr Val Pro Gly Ser Asn Ser Trp Ala Pro Pro Met Gly
 370 375 380

Ala Gly Ser His Arg Val Glu Gly Trp Thr Val Tyr Gly Leu Ala Thr
 385 390 395 400

Leu Leu Ile Leu Thr Val Thr Ala Ile Val Ala Lys Ile Leu Leu His
 405 410 415

Val Thr Phe Lys Ser His Arg Val Pro Ala Ser Gly Asp Leu Arg Asp
 420 425 430

Cys His Gln Pro Gly Thr Ser Gly Glu Ile Trp Ser Ile Phe Tyr Lys
 435 440 445

Pro Ser Thr Ser Ile Ser Ile Phe Lys Lys Lys Leu Lys Gly Gln Ser
450 455 460

Gln Gln Asp Asp Arg Asn Pro Leu Val Ser Asp
465 470 475

<210> 374

<211> 19

<212> PRT

<213> Homo sapiens

<400> 374

Met Ala Pro Pro Ala Ala Arg Leu Ala Leu Leu Ser Ala Ala Ala Leu
1 5 10 15

Thr Leu Ala

<210> 375

<211> 456

<212> PRT

<213> Homo sapiens

<400> 375

Ala Arg Pro Ala Pro Ser Pro Gly Leu Gly Pro Gly Pro Glu Cys Phe
1 5 10 15

Thr Ala Asn Gly Ala Asp Tyr Arg Gly Thr Gln Asn Trp Thr Ala Leu
20 25 30

Gln Gly Gly Lys Pro Cys Leu Phe Trp Asn Glu Thr Phe Gln His Pro
35 40 45

Tyr Asn Thr Leu Lys Tyr Pro Asn Gly Glu Gly Gly Leu Gly Glu His
50 55 60

Asn Tyr Cys Arg Asn Pro Asp Gly Asp Val Ser Pro Trp Cys Tyr Val
65 70 75 80

Ala Glu His Glu Asp Gly Val Tyr Trp Lys Tyr Cys Glu Ile Pro Ala
85 90 95

Cys Gln Met Pro Gly Asn Leu Gly Cys Tyr Lys Asp His Gly Asn Pro
100 105 110

His Arg Val Glu Gly Trp Thr Val Tyr Gly Leu Ala Thr Leu Leu Ile
 370 375 380

Leu Thr Val Thr Ala Ile Val Ala Lys Ile Leu Leu His Val Thr Phe
 385 390 395 400

Lys Ser His Arg Val Pro Ala Ser Gly Asp Leu Arg Asp Cys His Gln
 405 410 415

Pro Gly Thr Ser Gly Glu Ile Trp Ser Ile Phe Tyr Lys Pro Ser Thr
 420 425 430

Ser Ile Ser Ile Phe Lys Lys Lys Leu Lys Gly Gln Ser Gln Gln Asp
 435 440 445

Asp Arg Asn Pro Leu Val Ser Asp
 450 455

<210> 376

<211> 373

<212> PRT

<213> Homo sapiens

<400> 376

Ala Arg Pro Ala Pro Ser Pro Gly Leu Gly Pro Gly Pro Glu Cys Phe
 1 5 10 15

Thr Ala Asn Gly Ala Asp Tyr Arg Gly Thr Gln Asn Trp Thr Ala Leu
 20 25 30

Gln Gly Gly Lys Pro Cys Leu Phe Trp Asn Glu Thr Phe Gln His Pro
 35 40 45

Tyr Asn Thr Leu Lys Tyr Pro Asn Gly Glu Gly Gly Leu Gly Glu His
 50 55 60

Asn Tyr Cys Arg Asn Pro Asp Gly Asp Val Ser Pro Trp Cys Tyr Val
 65 70 75 80

Ala Glu His Glu Asp Gly Val Tyr Trp Lys Tyr Cys Glu Ile Pro Ala
 85 90 95

Cys Gln Met Pro Gly Asn Leu Gly Cys Tyr Lys Asp His Gly Asn Pro
 100 105 110

Pro Pro Leu Thr Gly Thr Ser Lys Thr Ser Asn Lys Leu Thr Ile Gln
 115 120 125

Thr Cys Ile Ser Phe Cys Arg Ser Gln Arg Phe Lys Phe Ala Gly Met
 130 135 140

Glu Ser Gly Tyr Ala Cys Phe Cys Gly Asn Asn Pro Asp Tyr Trp Lys
 145 150 155 160

Tyr Gly Glu Ala Ala Ser Thr Glu Cys Asn Ser Val Cys Phe Gly Asp
 165 170 175

His Thr Gln Pro Cys Gly Gly Asp Gly Arg Ile Ile Leu Phe Asp Thr
 180 185 190

Leu Val Gly Ala Cys Gly Gly Asn Tyr Ser Ala Met Ser Ser Val Val
 195 200 205

Tyr Ser Pro Asp Phe Pro Asp Thr Tyr Ala Thr Gly Arg Val Cys Tyr
 210 215 220

Trp Thr Ile Arg Val Pro Gly Ala Ser His Ile His Phe Ser Phe Pro
 225 230 235 240

Leu Phe Asp Ile Arg Asp Ser Ala Asp Met Val Glu Leu Leu Asp Gly
 245 250 255

Tyr Thr His Arg Val Leu Ala Arg Phe His Gly Arg Ser Arg Pro Pro
 260 265 270

Leu Ser Phe Asn Val Ser Leu Asp Phe Val Ile Leu Tyr Phe Phe Ser
 275 280 285

Asp Arg Ile Asn Gln Ala Gln Gly Phe Ala Val Leu Tyr Gln Ala Val
 290 295 300

Lys Glu Glu Leu Pro Gln Glu Arg Pro Ala Val Asn Gln Thr Val Ala
 305 310 315 320

Glu Val Ile Thr Glu Gln Ala Asn Leu Ser Val Ser Ala Ala Arg Ser
 325 330 335

Ser Lys Val Leu Tyr Val Ile Thr Thr Ser Pro Ser His Pro Pro Gln
 340 345 350

Thr Val Pro Gly Ser Asn Ser Trp Ala Pro Pro Met Gly Ala Gly Ser
 355 360 365

His Arg Val Glu Gly
 370

<210> 377
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 377
 Trp Thr Val Tyr Gly Leu Ala Thr Leu Leu Ile Leu Thr Val Thr Ala
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 Ile Val Ala Lys Ile Leu Leu
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<210> 378
 <211> 60
 <212> PRT
 <213> Homo sapiens

<400> 378
 His Val Thr Phe Lys Ser His Arg Val Pro Ala Ser Gly Asp Leu Arg
 1 5 10 15
 Asp Cys His Gln Pro Gly Thr Ser Gly Glu Ile Trp Ser Ile Phe Tyr
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 Lys Pro Ser Thr Ser Ile Ser Ile Phe Lys Lys Lys Leu Lys Gly Gln
 35 40 45
 Ser Gln Gln Asp Asp Arg Asn Pro Leu Val Ser Asp
 50 55 60

<210> 379
 <211> 4628
 <212> DNA
 <213> Homo sapiens

<400> 379
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 aatggagacg gtccctgctc tgggacagtg gaggtgaaat tccagggaca gtgggggact 240
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<211> 4359
<212> DNA
<213> Homo sapiens

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<210> 381

<211> 1453

<212> PRT

<213> Homo sapiens

<400> 381

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Cys His Gln Asn Leu Phe Ser Ala Val Val Thr Cys Ile Leu Leu Leu
          20             25             30

```

```

Asn Ser Cys Phe Leu Ile Ser Ser Phe Asn Gly Thr Asp Leu Glu Leu
          35             40             45

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Arg Leu Val Asn Gly Asp Gly Pro Cys Ser Gly Thr Val Glu Val Lys
          50             55             60

```

```

Phe Gln Gly Gln Trp Gly Thr Val Cys Asp Asp Gly Trp Asn Thr Thr
          65             70             75             80

```

```

Ala Ser Thr Val Val Cys Lys Gln Leu Gly Cys Pro Phe Ser Phe Ala
          85             90             95

```

```

Met Phe Arg Phe Gly Gln Ala Val Thr Arg His Gly Lys Ile Trp Leu
          100             105             110

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```

Asp Asp Val Ser Cys Tyr Gly Asn Glu Ser Ala Leu Trp Glu Cys Gln
          115             120             125

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His Arg Glu Trp Gly Ser His Asn Cys Tyr His Gly Glu Asp Val Gly
          130             135             140

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Val Asn Cys Tyr Gly Glu Ala Asn Leu Gly Leu Arg Leu Val Asp Gly
          145             150             155             160

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Asn Asn Ser Cys Ser Gly Arg Val Glu Val Lys Phe Gln Glu Arg Trp
          165             170             175

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Gly Thr Ile Cys Asp Asp Gly Trp Asn Leu Asn Thr Ala Ala Val Val
 180 185 190

Cys Arg Gln Leu Gly Cys Pro Ser Ser Phe Ile Ser Ser Gly Val Val
 195 200 205

Asn Ser Pro Ala Val Leu Arg Pro Ile Trp Leu Asp Asp Ile Leu Cys
 210 215 220

Gln Gly Asn Glu Leu Ala Leu Trp Asn Cys Arg His Arg Gly Trp Gly
 225 230 235 240

Asn His Asp Cys Ser His Asn Glu Asp Val Thr Leu Thr Cys Tyr Asp
 245 250 255

Ser Ser Asp Leu Glu Leu Arg Leu Val Gly Gly Thr Asn Arg Cys Met
 260 265 270

Gly Arg Val Glu Leu Lys Ile Gln Gly Arg Trp Gly Thr Val Cys His
 275 280 285

His Lys Trp Asn Asn Ala Ala Ala Asp Val Val Cys Lys Gln Leu Gly
 290 295 300

Cys Gly Thr Ala Leu His Phe Ala Gly Leu Pro His Leu Gln Ser Gly
 305 310 315 320

Ser Asp Val Val Trp Leu Asp Gly Val Ser Cys Ser Gly Asn Glu Ser
 325 330 335

Phe Leu Trp Asp Cys Arg His Ser Gly Thr Val Asn Phe Asp Cys Leu
 340 345 350

His Gln Asn Asp Val Ser Val Ile Cys Ser Asp Gly Ala Asp Leu Glu
 355 360 365

Leu Arg Leu Ala Asp Gly Ser Asn Asn Cys Ser Gly Arg Val Glu Val
 370 375 380

Arg Ile His Glu Gln Trp Trp Thr Ile Cys Asp Gln Asn Trp Lys Asn
 385 390 395 400

Glu Gln Ala Leu Val Val Cys Lys Gln Leu Gly Cys Pro Phe Ser Val
 405 410 415

Phe Gly Ser Arg Arg Ala Lys Pro Ser Asn Glu Ala Arg Asp Ile Trp
 420 425 430

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Thr	Tyr	Asp	Gly	Lys	Ala	Lys	Arg	Thr	Cys	Phe	Arg	Arg	Ser	Asp	Ala		
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Gly	Val	Ile	Cys	Ser	Asp	Lys	Ala	Asp	Leu	Asp	Leu	Arg	Leu	Val	Gly		
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Ala	His	Ser	Pro	Cys	Tyr	Gly	Arg	Leu	Glu	Val	Lys	Tyr	Gln	Gly	Glu		
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			500					505					510				
Val	Cys	Lys	Gln	Leu	Gly	Cys	Gly	Lys	Pro	Met	His	Val	Phe	Gly	Met		
	515						520					525					
Thr	Tyr	Phe	Lys	Glu	Ala	Ser	Gly	Pro	Ile	Trp	Leu	Asp	Asp	Val	Ser		
	530					535					540						
Cys	Ile	Gly	Asn	Glu	Ser	Asn	Ile	Trp	Asp	Cys	Glu	His	Ser	Gly	Trp		
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				565					570					575			
Gly	Asp	Ala	Thr	Trp	Gly	Leu	Arg	Leu	Val	Gly	Gly	Ser	Asn	Arg	Cys		
			580					585					590				
Ser	Gly	Arg	Leu	Glu	Val	Tyr	Phe	Gln	Gly	Arg	Trp	Gly	Thr	Val	Cys		
	595						600					605					
Asp	Asp	Gly	Trp	Asn	Ser	Lys	Ala	Ala	Ala	Val	Val	Cys	Ser	Gln	Leu		
	610					615					620						
Asp	Cys	Pro	Ser	Ser	Ile	Ile	Gly	Met	Gly	Leu	Gly	Asn	Ala	Ser	Thr		
625					630					635					640		
Gly	Tyr	Gly	Lys	Ile	Trp	Leu	Asp	Asp	Val	Ser	Cys	Asp	Gly	Asp	Glu		
				645					650					655			
Ser	Asp	Leu	Trp	Ser	Cys	Arg	Asn	Ser	Gly	Trp	Gly	Asn	Asn	Asp	Cys		
		660						665					670				
Ser	His	Ser	Glu	Asp	Val	Gly	Val	Ile	Cys	Ser	Asp	Ala	Ser	Asp	Met		
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Glu Leu Arg Leu Val Gly Gly Ser Ser Arg Cys Ala Gly Lys Val Glu
690 695 700

Val Asn Val Gln Gly Ala Val Gly Ile Leu Cys Ala Asn Gly Trp Gly
705 710 715 720

Met Asn Ile Ala Glu Val Val Cys Arg Gln Leu Glu Cys Gly Ser Ala
725 730 735

Ile Arg Val Ser Arg Glu Pro His Phe Thr Glu Arg Thr Leu His Ile
740 745 750

Leu Met Ser Asn Ser Gly Cys Thr Gly Gly Glu Ala Ser Leu Trp Asp
755 760 765

Cys Ile Arg Trp Glu Trp Lys Gln Thr Ala Cys His Leu Asn Met Glu
770 775 780

Ala Ser Leu Ile Cys Ser Ala His Arg Gln Pro Arg Leu Val Gly Ala
785 790 795 800

Asp Met Pro Cys Ser Gly Arg Val Glu Val Lys His Ala Asp Thr Trp
805 810 815

Arg Ser Val Cys Asp Ser Asp Phe Ser Leu His Ala Ala Asn Val Leu
820 825 830

Cys Arg Glu Leu Asn Cys Gly Asp Ala Ile Ser Leu Ser Val Gly Asp
835 840 845

His Phe Gly Lys Gly Asn Gly Leu Thr Trp Ala Glu Lys Phe Gln Cys
850 855 860

Glu Gly Ser Glu Thr His Leu Ala Leu Cys Pro Ile Val Gln His Pro
865 870 875 880

Glu Asp Thr Cys Ile His Ser Arg Glu Val Gly Val Val Cys Ser Arg
885 890 895

Tyr Thr Asp Val Arg Leu Val Asn Gly Lys Ser Gln Cys Asp Gly Gln
900 905 910

Val Glu Ile Asn Val Leu Gly His Trp Gly Ser Leu Cys Asp Thr His
915 920 925

Trp Asp Pro Glu Asp Ala Arg Val Leu Cys Arg Gln Leu Ser Cys Gly
930 935 940

Thr Ala Leu Ser Thr Thr Gly Gly Lys Tyr Ile Gly Glu Arg Ser Val
 945 950 955 960

Arg Val Trp Gly His Arg Phe His Cys Leu Gly Asn Glu Ser Leu Leu
 965 970 975

Asp Asn Cys Gln Met Thr Val Leu Gly Ala Pro Pro Cys Ile His Gly
 980 985 990

Asn Thr Val Ser Val Ile Cys Thr Gly Ser Leu Thr Gln Pro Leu Phe
 995 1000 1005

Pro Cys Leu Ala Asn Val Ser Asp Pro Tyr Leu Ser Ala Val Pro Glu
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Gly Ser Ala Leu Ile Cys Leu Glu Asp Lys Arg Leu Arg Leu Val Asp
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Gly Asp Ser Arg Cys Ala Gly Arg Val Glu Ile Tyr His Asp Gly Phe
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Trp Gly Thr Ile Cys Asp Asp Gly Trp Asp Leu Ser Asp Ala His Val
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Val Cys Gln Lys Leu Gly Cys Gly Val Ala Phe Asn Ala Thr Val Ser
 1075 1080 1085

Ala His Phe Gly Glu Gly Ser Gly Pro Ile Trp Leu Asp Asp Leu Asn
 1090 1095 1100

Cys Thr Gly Thr Glu Ser His Leu Trp Gln Cys Pro Ser Arg Gly Trp
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Gly Gln His Asp Cys Arg His Lys Glu Asp Ala Gly Val Ile Cys Ser
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Glu Phe Thr Ala Leu Arg Leu Tyr Ser Glu Thr Glu Thr Glu Ser Cys
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Ala Gly Arg Leu Glu Val Phe Tyr Asn Gly Thr Trp Gly Ser Val Gly
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Arg Arg Asn Ile Thr Thr Ala Ile Ala Gly Ile Val Cys Arg Gln Leu
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Gly Cys Gly Glu Asn Gly Val Val Ser Leu Ala Pro Leu Ser Lys Thr
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Gly Ser Gly Phe Met Trp Val Asp Asp Ile Gln Cys Pro Lys Thr His
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Ser Pro Ala Glu Glu Thr Trp Ile Thr Cys Glu Asp Arg Ile Arg Val
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Gly Ser Trp Gly Thr Val Cys Asp Asp Ser Trp Asp Leu Ala Glu Ala
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 1285 1290 1295

Arg Asp Ala Ser Phe Gly Gln Gly Thr Gly Thr Ile Trp Leu Asp Asp
 1300 1305 1310

Met Arg Cys Lys Gly Asn Glu Ser Phe Leu Trp Asp Cys His Ala Lys
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Pro Trp Gly Gln Ser Asp Cys Gly His Lys Glu Asp Ala Gly Val Arg
 1330 1335 1340

Cys Ser Gly Gln Ser Leu Lys Ser Leu Asn Ala Ser Ser Gly His Leu
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Ala Leu Ile Leu Ser Ser Ile Phe Gly Leu Leu Leu Leu Val Leu Phe
 1365 1370 1375

Ile Leu Phe Leu Thr Trp Cys Arg Val Gln Lys Gln Lys His Leu Pro
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Leu Arg Val Ser Thr Arg Arg Arg Gly Ser Leu Glu Glu Asn Leu Phe
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His Glu Met Glu Thr Cys Leu Lys Arg Glu Asp Pro His Gly Thr Arg
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Ser Leu Leu Gly Val Leu Pro Ala Ser Glu Ala Thr Lys
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<210> 382
 <211> 40
 <212> PRT
 <213> Homo sapiens

<400> 382
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 35 40

<210> 383
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 <212> PRT
 <213> Homo sapiens

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 Thr Arg His Gly Lys Ile Trp Leu Asp Asp Val Ser Cys Tyr Gly Asn
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 Glu Ser Ala Leu Trp Glu Cys Gln His Arg Glu Trp Gly Ser His Asn
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 Cys Tyr His Gly Glu Asp Val Gly Val Asn Cys Tyr Gly Glu Ala Asn
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Thr	Cys	Phe	Arg	Arg	Ser	Asp	Ala	Gly	Val	Ile	Cys	Ser	Asp	Lys	Ala
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Lys	Pro	Met	His	Val	Phe	Gly	Met	Thr	Tyr	Phe	Lys	Glu	Ala	Ser	Gly
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Pro	Ile	Trp	Leu	Asp	Asp	Val	Ser	Cys	Ile	Gly	Asn	Glu	Ser	Asn	Ile
			500					505					510		
Trp	Asp	Cys	Glu	His	Ser	Gly	Trp	Gly	Lys	His	Asn	Cys	Val	His	Arg
		515					520					525			
Glu	Asp	Val	Ile	Val	Thr	Cys	Ser	Gly	Asp	Ala	Thr	Trp	Gly	Leu	Arg
	530					535					540				
Leu	Val	Gly	Gly	Ser	Asn	Arg	Cys	Ser	Gly	Arg	Leu	Glu	Val	Tyr	Phe
545					550					555					560
Gln	Gly	Arg	Trp	Gly	Thr	Val	Cys	Asp	Asp	Gly	Trp	Asn	Ser	Lys	Ala
				565					570					575	
Ala	Ala	Val	Val	Cys	Ser	Gln	Leu	Asp	Cys	Pro	Ser	Ser	Ile	Ile	Gly
			580					585					590		
Met	Gly	Leu	Gly	Asn	Ala	Ser	Thr	Gly	Tyr	Gly	Lys	Ile	Trp	Leu	Asp
		595					600					605			
Asp	Val	Ser	Cys	Asp	Gly	Asp	Glu	Ser	Asp	Leu	Trp	Ser	Cys	Arg	Asn
	610					615					620				
Ser	Gly	Trp	Gly	Asn	Asn	Asp	Cys	Ser	His	Ser	Glu	Asp	Val	Gly	Val
625					630					635					640
Ile	Cys	Ser	Asp	Ala	Ser	Asp	Met	Glu	Leu	Arg	Leu	Val	Gly	Gly	Ser

900	905	910
Lys Tyr Ile Gly Glu Arg Ser Val Arg Val Trp Gly His Arg Phe His		
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Cys Leu Gly Asn Glu Ser Leu Leu Asp Asn Cys Gln Met Thr Val Leu		
930	935	940
Gly Ala Pro Pro Cys Ile His Gly Asn Thr Val Ser Val Ile Cys Thr		
945	950	955 960
Gly Ser Leu Thr Gln Pro Leu Phe Pro Cys Leu Ala Asn Val Ser Asp		
	965 970	975
Pro Tyr Leu Ser Ala Val Pro Glu Gly Ser Ala Leu Ile Cys Leu Glu		
	980 985	990
Asp Lys Arg Leu Arg Leu Val Asp Gly Asp Ser Arg Cys Ala Gly Arg		
	995 1000	1005
Val Glu Ile Tyr His Asp Gly Phe Trp Gly Thr Ile Cys Asp Asp Gly		
1010	1015	1020
Trp Asp Leu Ser Asp Ala His Val Val Cys Gln Lys Leu Gly Cys Gly		
1025	1030 1035	1040
Val Ala Phe Asn Ala Thr Val Ser Ala His Phe Gly Glu Gly Ser Gly		
	1045 1050	1055
Pro Ile Trp Leu Asp Asp Leu Asn Cys Thr Gly Thr Glu Ser His Leu		
	1060 1065	1070
Trp Gln Cys Pro Ser Arg Gly Trp Gly Gln His Asp Cys Arg His Lys		
1075	1080	1085
Glu Asp Ala Gly Val Ile Cys Ser Glu Phe Thr Ala Leu Arg Leu Tyr		
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Ser Glu Thr Glu Thr Glu Ser Cys Ala Gly Arg Leu Glu Val Phe Tyr		
1105	1110 1115	1120
Asn Gly Thr Trp Gly Ser Val Gly Arg Arg Asn Ile Thr Thr Ala Ile		
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Ala Gly Ile Val Cys Arg Gln Leu Gly Cys Gly Glu Asn Gly Val Val		
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Ser Leu Ala Pro Leu Ser Lys Thr Gly Ser Gly Phe Met Trp Val Asp		

Asp Ile Gln Cys Pro Lys Thr His Ile Ser Ile Trp Gln Cys Leu Ser
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 Thr Cys Glu Asp Arg Ile Arg Val Arg Gly Gly Asp Thr Glu Cys Ser
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 Asp Ser Trp Asp Leu Ala Glu Ala Glu Val Val Cys Gln Gln Leu Gly
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 Cys Gly Ser Ala Leu Ala Ala Leu Arg Asp Ala Ser Phe Gly Gln Gly
 1250 1255 1260
 Thr Gly Thr Ile Trp Leu Asp Asp Met Arg Cys Lys Gly Asn Glu Ser
 1265 1270 1275 1280
 Phe Leu Trp Asp Cys His Ala Lys Pro Trp Gly Gln Ser Asp Cys Gly
 1285 1290 1295
 His Lys Glu Asp Ala Gly Val Arg Cys Ser Gly Gln Ser Leu Lys Ser
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 Leu Asn Ala Ser Ser Gly His Leu Ala Leu Ile Leu Ser Ser Ile Phe
 1315 1320 1325
 Gly Leu Leu Leu Leu Val Leu Phe Ile Leu Phe Leu Thr Trp Cys Arg
 1330 1335 1340
 Val Gln Lys Gln Lys His Leu Pro Leu Arg Val Ser Thr Arg Arg Arg
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 Gly Ser Leu Glu Glu Asn Leu Phe His Glu Met Glu Thr Cys Leu Lys
 1365 1370 1375
 Arg Glu Asp Pro His Gly Thr Arg Thr Ser Asp Asp Thr Pro Asn His
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 Gly Cys Glu Asp Ala Ser Asp Thr Ser Leu Leu Gly Val Leu Pro Ala
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 Ser Glu Ala Thr Lys

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<210> 384

<211> 1319

<212> PRT

<213> Homo sapiens

<400> 384

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Cys Asp Asp Gly Trp Asn Thr Thr Ala Ser Thr Val Val Cys Lys Gln
35 40 45

Leu Gly Cys Pro Phe Ser Phe Ala Met Phe Arg Phe Gly Gln Ala Val
50 55 60

Thr Arg His Gly Lys Ile Trp Leu Asp Asp Val Ser Cys Tyr Gly Asn
65 70 75 80

Glu Ser Ala Leu Trp Glu Cys Gln His Arg Glu Trp Gly Ser His Asn
85 90 95

Cys Tyr His Gly Glu Asp Val Gly Val Asn Cys Tyr Gly Glu Ala Asn
100 105 110

Leu Gly Leu Arg Leu Val Asp Gly Asn Asn Ser Cys Ser Gly Arg Val
115 120 125

Glu Val Lys Phe Gln Glu Arg Trp Gly Thr Ile Cys Asp Asp Gly Trp
130 135 140

Asn Leu Asn Thr Ala Ala Val Val Cys Arg Gln Leu Gly Cys Pro Ser
145 150 155 160

Ser Phe Ile Ser Ser Gly Val Val Asn Ser Pro Ala Val Leu Arg Pro
165 170 175

Ile Trp Leu Asp Asp Ile Leu Cys Gln Gly Asn Glu Leu Ala Leu Trp
180 185 190

Asn Cys Arg His Arg Gly Trp Gly Asn His Asp Cys Ser His Asn Glu
195 200 205

Gly	Gly	Glu	Ala	Ser	Leu	Trp	Asp	Cys	Ile	Arg	Trp	Glu	Trp	Lys	Gln	725	730	735	
Thr	Ala	Cys	His	Leu	Asn	Met	Glu	Ala	Ser	Leu	Ile	Cys	Ser	Ala	His	740	745	750	
Arg	Gln	Pro	Arg	Leu	Val	Gly	Ala	Asp	Met	Pro	Cys	Ser	Gly	Arg	Val	755	760	765	
Glu	Val	Lys	His	Ala	Asp	Thr	Trp	Arg	Ser	Val	Cys	Asp	Ser	Asp	Phe	770	775	780	
Ser	Leu	His	Ala	Ala	Asn	Val	Leu	Cys	Arg	Glu	Leu	Asn	Cys	Gly	Asp	785	790	795	800
Ala	Ile	Ser	Leu	Ser	Val	Gly	Asp	His	Phe	Gly	Lys	Gly	Asn	Gly	Leu	805	810	815	
Thr	Trp	Ala	Glu	Lys	Phe	Gln	Cys	Glu	Gly	Ser	Glu	Thr	His	Leu	Ala	820	825	830	
Leu	Cys	Pro	Ile	Val	Gln	His	Pro	Glu	Asp	Thr	Cys	Ile	His	Ser	Arg	835	840	845	
Glu	Val	Gly	Val	Val	Cys	Ser	Arg	Tyr	Thr	Asp	Val	Arg	Leu	Val	Asn	850	855	860	
Gly	Lys	Ser	Gln	Cys	Asp	Gly	Gln	Val	Glu	Ile	Asn	Val	Leu	Gly	His	865	870	875	880
Trp	Gly	Ser	Leu	Cys	Asp	Thr	His	Trp	Asp	Pro	Glu	Asp	Ala	Arg	Val	885	890	895	
Leu	Cys	Arg	Gln	Leu	Ser	Cys	Gly	Thr	Ala	Leu	Ser	Thr	Thr	Gly	Gly	900	905	910	
Lys	Tyr	Ile	Gly	Glu	Arg	Ser	Val	Arg	Val	Trp	Gly	His	Arg	Phe	His	915	920	925	
Cys	Leu	Gly	Asn	Glu	Ser	Leu	Leu	Asp	Asn	Cys	Gln	Met	Thr	Val	Leu	930	935	940	
Gly	Ala	Pro	Pro	Cys	Ile	His	Gly	Asn	Thr	Val	Ser	Val	Ile	Cys	Thr	945	950	955	960
Gly	Ser	Leu	Thr	Gln	Pro	Leu	Phe	Pro	Cys	Leu	Ala	Asn	Val	Ser	Asp	965	970	975	

Pro Tyr Leu Ser Ala Val Pro Glu Gly Ser Ala Leu Ile Cys Leu Glu
 980 985 990

Asp Lys Arg Leu Arg Leu Val Asp Gly Asp Ser Arg Cys Ala Gly Arg
 995 1000 1005

Val Glu Ile Tyr His Asp Gly Phe Trp Gly Thr Ile Cys Asp Asp Gly
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Trp Asp Leu Ser Asp Ala His Val Val Cys Gln Lys Leu Gly Cys Gly
 1025 1030 1035 1040

Val Ala Phe Asn Ala Thr Val Ser Ala His Phe Gly Glu Gly Ser Gly
 1045 1050 1055

Pro Ile Trp Leu Asp Asp Leu Asn Cys Thr Gly Thr Glu Ser His Leu
 1060 1065 1070

Trp Gln Cys Pro Ser Arg Gly Trp Gly Gln His Asp Cys Arg His Lys
 1075 1080 1085

Glu Asp Ala Gly Val Ile Cys Ser Glu Phe Thr Ala Leu Arg Leu Tyr
 1090 1095 1100

Ser Glu Thr Glu Thr Glu Ser Cys Ala Gly Arg Leu Glu Val Phe Tyr
 1105 1110 1115 1120

Asn Gly Thr Trp Gly Ser Val Gly Arg Arg Asn Ile Thr Thr Ala Ile
 1125 1130 1135

Ala Gly Ile Val Cys Arg Gln Leu Gly Cys Gly Glu Asn Gly Val Val
 1140 1145 1150

Ser Leu Ala Pro Leu Ser Lys Thr Gly Ser Gly Phe Met Trp Val Asp
 1155 1160 1165

Asp Ile Gln Cys Pro Lys Thr His Ile Ser Ile Trp Gln Cys Leu Ser
 1170 1175 1180

Ala Pro Trp Glu Arg Arg Ile Ser Ser Pro Ala Glu Glu Thr Trp Ile
 1185 1190 1195 1200

Thr Cys Glu Asp Arg Ile Arg Val Arg Gly Gly Asp Thr Glu Cys Ser
 1205 1210 1215

Gly Arg Val Glu Ile Trp His Ala Gly Ser Trp Gly Thr Val Cys Asp
 1220 1225 1230

Asp Ser Trp Asp Leu Ala Glu Ala Glu Val Val Cys Gln Gln Leu Gly
 1235 1240 1245

Cys Gly Ser Ala Leu Ala Ala Leu Arg Asp Ala Ser Phe Gly Gln Gly
 1250 1255 1260

Thr Gly Thr Ile Trp Leu Asp Asp Met Arg Cys Lys Gly Asn Glu Ser
 1265 1270 1275 1280

Phe Leu Trp Asp Cys His Ala Lys Pro Trp Gly Gln Ser Asp Cys Gly
 1285 1290 1295

His Lys Glu Asp Ala Gly Val Arg Cys Ser Gly Gln Ser Leu Lys Ser
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Leu Asn Ala Ser Ser Gly His
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<210> 385

<211> 24

<212> PRT

<213> Homo sapiens

<400> 385

Leu Ala Leu Ile Leu Ser Ser Ile Phe Gly Leu Leu Leu Leu Val Leu
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<210> 386

<211> 70

<212> PRT

<213> Homo sapiens

<400> 386

Arg Val Gln Lys Gln Lys His Leu Pro Leu Arg Val Ser Thr Arg Arg
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Arg Gly Ser Leu Glu Glu Asn Leu Phe His Glu Met Glu Thr Cys Leu
 20 25 30

Lys Arg Glu Asp Pro His Gly Thr Arg Thr Ser Asp Asp Thr Pro Asn
 35 40 45

His Gly Cys Glu Asp Ala Ser Asp Thr Ser Leu Leu Gly Val Leu Pro

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<210> 387

<211> 3104

<212> DNA

<213> Homo sapiens

<400> 387

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<210> 388

<211> 2283

<212> DNA

<213> Homo sapiens

<400> 388

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<210> 389

<211> 761

<212> PRT

<213> Homo sapiens

<400> 389

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Gly Gly Gly Gln Gly Pro Met Pro Arg Val Arg Tyr Tyr Ala Gly Asp
      35              40              45

Glu Arg Arg Ala Leu Ser Phe Phe His Gln Lys Gly Leu Gln Asp Phe
      50              55              60

Asp Thr Leu Leu Leu Ser Gly Asp Gly Asn Thr Leu Tyr Val Gly Ala
      65              70              75              80

Arg Glu Ala Ile Leu Ala Leu Asp Ile Gln Asp Pro Gly Val Pro Arg
      85              90              95

Leu Lys Asn Met Ile Pro Trp Pro Ala Ser Asp Arg Lys Lys Ser Glu
      100             105             110

Cys Ala Phe Lys Lys Lys Ser Asn Glu Thr Gln Cys Phe Asn Phe Ile
      115             120             125

Arg Val Leu Val Ser Tyr Asn Val Thr His Leu Tyr Thr Cys Gly Thr

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Pro Arg Glu His Val Lys Val Pro Leu Thr Arg Val Ser Gly Gly Ala
660 665 670

Ala Leu Ala Ala Gln Gln Ser Tyr Trp Pro His Phe Val Thr Val Thr
675 680 685

Val Leu Phe Ala Leu Val Leu Ser Gly Ala Leu Ile Ile Leu Val Ala
690 695 700

Ser Pro Leu Arg Ala Leu Arg Ala Arg Gly Lys Val Gln Gly Cys Glu
705 710 715 720

Thr Leu Arg Pro Gly Glu Lys Ala Pro Leu Ser Arg Glu Gln His Leu
725 730 735

Gln Ser Pro Lys Glu Cys Arg Thr Ser Ala Ser Asp Val Asp Ala Asp
740 745 750

Asn Asn Cys Leu Gly Thr Glu Val Ala
755 760

<210> 390

<211> 31

<212> PRT

<213> Homo sapiens

<400> 390

Met Ala Leu Pro Ala Leu Gly Leu Asp Pro Trp Ser Leu Leu Gly Leu
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<210> 391

<211> 730

<212> PRT

<213> Homo sapiens

<400> 391

Gly Gly Gly Gly Gln Gly Pro Met Pro Arg Val Arg Tyr Tyr Ala Gly
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Asp Glu Arg Arg Ala Leu Ser Phe Phe His Gln Lys Gly Leu Gln Asp
20 25 30

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Phe Asp Thr Leu Leu Leu Ser Gly Asp Gly Asn Thr Leu Tyr Val Gly
35 40 45

Ala Arg Glu Ala Ile Leu Ala Leu Asp Ile Gln Asp Pro Gly Val Pro
50 55 60

Arg Leu Lys Asn Met Ile Pro Trp Pro Ala Ser Asp Arg Lys Lys Ser
65 70 75 80

Glu Cys Ala Phe Lys Lys Lys Ser Asn Glu Thr Gln Cys Phe Asn Phe
85 90 95

Ile Arg Val Leu Val Ser Tyr Asn Val Thr His Leu Tyr Thr Cys Gly
100 105 110

Thr Phe Ala Phe Ser Pro Ala Cys Thr Phe Ile Glu Leu Gln Asp Ser
115 120 125

Tyr Leu Leu Pro Ile Ser Glu Asp Lys Val Met Glu Gly Lys Gly Gln
130 135 140

Ser Pro Phe Asp Pro Ala His Lys His Thr Ala Val Leu Val Asp Gly
145 150 155 160

Met Leu Tyr Ser Gly Thr Met Asn Asn Phe Leu Gly Ser Glu Pro Ile
165 170 175

Leu Met Arg Thr Leu Gly Ser Gln Pro Val Leu Lys Thr Asp Asn Phe
180 185 190

Leu Arg Trp Leu His His Asp Ala Ser Phe Val Ala Ala Ile Pro Ser
195 200 205

Thr Gln Val Val Tyr Phe Phe Phe Glu Glu Thr Ala Ser Glu Phe Asp
210 215 220

Phe Phe Glu Arg Leu His Thr Ser Arg Val Ala Arg Val Cys Lys Asn
225 230 235 240

Asp Val Gly Gly Glu Lys Leu Leu Gln Lys Lys Trp Thr Thr Phe Leu
245 250 255

Lys Ala Gln Leu Leu Cys Thr Gln Pro Gly Gln Leu Pro Phe Asn Val
260 265 270

Ile Arg His Ala Val Leu Leu Pro Ala Asp Ser Pro Thr Ala Pro His
275 280 285

Ile Tyr Ala Val Phe Thr Ser Gln Trp Gln Val Gly Gly Thr Arg Ser
290 295 300

Ser Ala Val Cys Ala Phe Ser Leu Leu Asp Ile Glu Arg Val Phe Lys
305 310 315 320

Gly Lys Tyr Lys Glu Leu Asn Lys Glu Thr Ser Arg Trp Thr Thr Tyr
325 330 335

Arg Gly Pro Glu Thr Asn Pro Arg Pro Gly Ser Cys Ser Val Gly Pro
340 345 350

Ser Ser Asp Lys Ala Leu Thr Phe Met Lys Asp His Phe Leu Met Asp
355 360 365

Glu Gln Val Val Gly Thr Pro Leu Leu Val Lys Ser Gly Val Glu Tyr
370 375 380

Thr Arg Leu Ala Val Glu Thr Ala Gln Gly Leu Asp Gly His Ser His
385 390 395 400

Leu Val Met Tyr Leu Gly Thr Thr Thr Gly Ser Leu His Lys Ala Val
405 410 415

Val Ser Gly Asp Ser Ser Ala His Leu Val Glu Glu Ile Gln Leu Phe
420 425 430

Pro Asp Pro Glu Pro Val Arg Asn Leu Gln Leu Ala Pro Thr Gln Gly
435 440 445

Ala Val Phe Val Gly Phe Ser Gly Gly Val Trp Arg Val Pro Arg Ala
450 455 460

Asn Cys Ser Val Tyr Glu Ser Cys Val Asp Cys Val Leu Ala Arg Asp
465 470 475 480

Pro His Cys Ala Trp Asp Pro Glu Ser Arg Thr Cys Cys Leu Leu Ser
485 490 495

Ala Pro Asn Leu Asn Ser Trp Lys Gln Asp Met Glu Arg Gly Asn Pro
500 505 510

Glu Trp Ala Cys Ala Ser Gly Pro Met Ser Arg Ser Leu Arg Pro Gln
515 520 525

Ser Arg Pro Gln Ile Ile Lys Glu Val Leu Ala Val Pro Asn Ser Ile
530 535 540

20	25	30
Phe Asp Thr Leu Leu Leu Ser Gly Asp Gly Asn Thr Leu Tyr Val Gly		
35	40	45
Ala Arg Glu Ala Ile Leu Ala Leu Asp Ile Gln Asp Pro Gly Val Pro		
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Arg Leu Lys Asn Met Ile Pro Trp Pro Ala Ser Asp Arg Lys Lys Ser		
65	70	75
		80
Glu Cys Ala Phe Lys Lys Lys Ser Asn Glu Thr Gln Cys Phe Asn Phe		
85	90	95
Ile Arg Val Leu Val Ser Tyr Asn Val Thr His Leu Tyr Thr Cys Gly		
100	105	110
Thr Phe Ala Phe Ser Pro Ala Cys Thr Phe Ile Glu Leu Gln Asp Ser		
115	120	125
Tyr Leu Leu Pro Ile Ser Glu Asp Lys Val Met Glu Gly Lys Gly Gln		
130	135	140
Ser Pro Phe Asp Pro Ala His Lys His Thr Ala Val Leu Val Asp Gly		
145	150	155
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Met Leu Tyr Ser Gly Thr Met Asn Asn Phe Leu Gly Ser Glu Pro Ile		
165	170	175
Leu Met Arg Thr Leu Gly Ser Gln Pro Val Leu Lys Thr Asp Asn Phe		
180	185	190
Leu Arg Trp Leu His His Asp Ala Ser Phe Val Ala Ala Ile Pro Ser		
195	200	205
Thr Gln Val Val Tyr Phe Phe Phe Glu Glu Thr Ala Ser Glu Phe Asp		
210	215	220
Phe Phe Glu Arg Leu His Thr Ser Arg Val Ala Arg Val Cys Lys Asn		
225	230	235
		240
Asp Val Gly Gly Glu Lys Leu Leu Gln Lys Lys Trp Thr Thr Phe Leu		
245	250	255
Lys Ala Gln Leu Leu Cys Thr Gln Pro Gly Gln Leu Pro Phe Asn Val		
260	265	270
Ile Arg His Ala Val Leu Leu Pro Ala Asp Ser Pro Thr Ala Pro His		

275	280	285
Ile Tyr Ala Val Phe Thr Ser Gln Trp Gln Val Gly Gly Thr Arg Ser		
290	295	300
Ser Ala Val Cys Ala Phe Ser Leu Leu Asp Ile Glu Arg Val Phe Lys		
305	310	315
Gly Lys Tyr Lys Glu Leu Asn Lys Glu Thr Ser Arg Trp Thr Thr Tyr		
325	330	335
Arg Gly Pro Glu Thr Asn Pro Arg Pro Gly Ser Cys Ser Val Gly Pro		
340	345	350
Ser Ser Asp Lys Ala Leu Thr Phe Met Lys Asp His Phe Leu Met Asp		
355	360	365
Glu Gln Val Val Gly Thr Pro Leu Leu Val Lys Ser Gly Val Glu Tyr		
370	375	380
Thr Arg Leu Ala Val Glu Thr Ala Gln Gly Leu Asp Gly His Ser His		
385	390	395
Leu Val Met Tyr Leu Gly Thr Thr Thr Gly Ser Leu His Lys Ala Val		
405	410	415
Val Ser Gly Asp Ser Ser Ala His Leu Val Glu Glu Ile Gln Leu Phe		
420	425	430
Pro Asp Pro Glu Pro Val Arg Asn Leu Gln Leu Ala Pro Thr Gln Gly		
435	440	445
Ala Val Phe Val Gly Phe Ser Gly Gly Val Trp Arg Val Pro Arg Ala		
450	455	460
Asn Cys Ser Val Tyr Glu Ser Cys Val Asp Cys Val Leu Ala Arg Asp		
465	470	475
Pro His Cys Ala Trp Asp Pro Glu Ser Arg Thr Cys Cys Leu Leu Ser		
485	490	495
Ala Pro Asn Leu Asn Ser Trp Lys Gln Asp Met Glu Arg Gly Asn Pro		
500	505	510
Glu Trp Ala Cys Ala Ser Gly Pro Met Ser Arg Ser Leu Arg Pro Gln		
515	520	525
Ser Arg Pro Gln Ile Ile Lys Glu Val Leu Ala Val Pro Asn Ser Ile		

530

535

540

Leu Glu Leu Pro Cys Pro His Leu Ser Ala Leu Ala Ser Tyr Tyr Trp
 545 550 555 560

Ser His Gly Pro Ala Ala Val Pro Glu Ala Ser Ser Thr Val Tyr Asn
 565 570 575

Gly Ser Leu Leu Leu Ile Val Gln Asp Gly Val Gly Gly Leu Tyr Gln
 580 585 590

Cys Trp Ala Thr Glu Asn Gly Phe Ser Tyr Pro Val Ile Ser Tyr Trp
 595 600 605

Val Asp Ser Gln Asp Gln Thr Leu Ala Leu Asp Pro Glu Leu Ala Gly
 610 615 620

Ile Pro Arg Glu His Val Lys Val Pro Leu Thr Arg Val Ser Gly Gly
 625 630 635 640

Ala Ala Leu Ala Ala Gln Gln Ser Tyr Trp Pro His
 645 650

<210> 393

<211> 21

<212> PRT

<213> Homo sapiens

<400> 393

Phe Val Thr Val Thr Val Leu Phe Ala Leu Val Leu Ser Gly Ala Leu
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Ile Ile Leu Val Ala
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<210> 394

<211> 57

<212> PRT

<213> Homo sapiens

<400> 394

Ser Pro Leu Arg Ala Leu Arg Ala Arg Gly Lys Val Gln Gly Cys Glu
 1 5 10 15

Thr Leu Arg Pro Gly Glu Lys Ala Pro Leu Ser Arg Glu Gln His Leu
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Gln Ser Pro Lys Glu Cys Arg Thr Ser Ala Ser Asp Val Asp Ala Asp
 35 40 45

Asn Asn Cys Leu Gly Thr Glu Val Ala
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<210> 395
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<210> 403
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 <212> DNA
 <213> Homo sapiens

<400> 403

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<210> 404
 <211> 1365
 <212> DNA
 <213> Homo sapiens

<400> 404

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gatttaagcg gttctgagtc tcttgaatct ctaaaagtgt attatgtaaa ctacaatttt 240
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<210> 405

<211> 455

<212> PRT

<213> Homo sapiens

<400> 405

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Met Cys Thr Lys Thr Ile Pro Val Leu Trp Gly Cys Phe Leu Leu Trp
  1                   5                   10                   15

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Asn Leu Tyr Val Ser Ser Ser Gln Thr Ile Tyr Pro Gly Ile Lys Ala
  20                   25                   30

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Arg Ile Thr Gln Arg Ala Leu Asp Tyr Gly Val Gln Ala Gly Met Lys
  35                   40                   45

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Met Ile Glu Gln Met Leu Lys Glu Lys Lys Leu Pro Asp Leu Ser Gly
  50                   55                   60

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Ser Glu Ser Leu Glu Phe Leu Lys Val Asp Tyr Val Asn Tyr Asn Phe
  65                   70                   75                   80

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Ser Asn Ile Lys Ile Ser Ala Phe Ser Phe Pro Asn Thr Ser Leu Ala
  85                   90                   95

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Phe Val Pro Gly Val Gly Ile Lys Ala Leu Thr Asn His Gly Thr Ala
100 105 110

Asn Ile Ser Thr Asp Trp Gly Phe Glu Ser Pro Leu Phe Val Leu Tyr
115 120 125

Asn Ser Phe Ala Glu Pro Met Glu Lys Pro Ile Leu Lys Asn Leu Asn
130 135 140

Glu Met Leu Cys Pro Ile Ile Ala Ser Glu Val Lys Ala Leu Asn Ala
145 150 155 160

Asn Leu Ser Thr Leu Glu Val Leu Thr Lys Ile Asp Asn Tyr Thr Leu
165 170 175

Leu Asp Tyr Ser Leu Ile Ser Ser Pro Glu Ile Thr Glu Asn Tyr Leu
180 185 190

Asp Leu Asn Leu Lys Gly Val Phe Tyr Pro Leu Glu Asn Leu Thr Asp
195 200 205

Pro Pro Phe Ser Pro Val Pro Phe Val Leu Pro Glu Arg Ser Asn Ser
210 215 220

Met Leu Tyr Ile Gly Ile Ala Glu Tyr Phe Phe Lys Ser Ala Ser Phe
225 230 235 240

Ala His Phe Thr Ala Gly Val Phe Asn Leu Thr Leu Ser Thr Glu Glu
245 250 255

Ile Ser Asn His Phe Val Gln Asn Ser Gln Gly Leu Gly Asn Val Leu
260 265 270

Ser Arg Ile Ala Glu Ile Tyr Ile Leu Ser Gln Pro Phe Met Val Arg
275 280 285

Ile Met Ala Thr Glu Pro Pro Ile Ile Asn Leu Gln Pro Gly Asn Phe
290 295 300

Thr Leu Asp Ile Pro Ala Ser Ile Met Met Leu Thr Gln Pro Lys Asn
305 310 315 320

Ser Thr Val Glu Thr Ile Val Ser Met Asp Phe Val Ala Ser Thr Ser
325 330 335

Val Gly Leu Val Ile Leu Gly Gln Arg Leu Val Cys Ser Leu Ser Leu
340 345 350

Asn Arg Phe Arg Leu Ala Leu Pro Glu Ser Asn Arg Ser Asn Ile Glu
 355 360 365

Val Leu Arg Phe Glu Asn Ile Leu Ser Ser Ile Leu His Phe Gly Val
 370 375 380

Leu Pro Leu Ala Asn Ala Lys Leu Gln Gln Gly Phe Pro Leu Pro Asn
 385 390 395 400

Pro His Lys Phe Leu Phe Val Asn Ser Asp Ile Glu Val Leu Glu Gly
 405 410 415

Phe Leu Leu Ile Ser Thr Asp Leu Lys Tyr Glu Thr Ser Ser Lys Gln
 420 425 430

Gln Pro Ser Phe His Val Trp Glu Gly Leu Asn Leu Ile Ser Arg Gln
 435 440 445

Trp Arg Gly Lys Ser Ala Pro
 450 455

<210> 406

<211> 23

<212> PRT

<213> Homo sapiens

<400> 406

Met Cys Thr Lys Thr Ile Pro Val Leu Trp Gly Cys Phe Leu Leu Trp
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Asn Leu Tyr Val Ser Ser Ser
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<210> 407

<211> 432

<212> PRT

<213> Homo sapiens

<400> 407

Gln Thr Ile Tyr Pro Gly Ile Lys Ala Arg Ile Thr Gln Arg Ala Leu
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Asp Tyr Gly Val Gln Ala Gly Met Lys Met Ile Glu Gln Met Leu Lys
 20 25 30

Glu Lys Lys Leu Pro Asp Leu Ser Gly Ser Glu Ser Leu Glu Phe Leu

35	40	45
Lys Val Asp Tyr Val Asn Tyr Asn Phe Ser Asn Ile Lys Ile Ser Ala		
50	55	60
Phe Ser Phe Pro Asn Thr Ser Leu Ala Phe Val Pro Gly Val Gly Ile		
65	70	75
Lys Ala Leu Thr Asn His Gly Thr Ala Asn Ile Ser Thr Asp Trp Gly		
	85	90
		95
Phe Glu Ser Pro Leu Phe Val Leu Tyr Asn Ser Phe Ala Glu Pro Met		
	100	105
		110
Glu Lys Pro Ile Leu Lys Asn Leu Asn Glu Met Leu Cys Pro Ile Ile		
	115	120
		125
Ala Ser Glu Val Lys Ala Leu Asn Ala Asn Leu Ser Thr Leu Glu Val		
	130	135
		140
Leu Thr Lys Ile Asp Asn Tyr Thr Leu Leu Asp Tyr Ser Leu Ile Ser		
145	150	155
		160
Ser Pro Glu Ile Thr Glu Asn Tyr Leu Asp Leu Asn Leu Lys Gly Val		
	165	170
		175
Phe Tyr Pro Leu Glu Asn Leu Thr Asp Pro Pro Phe Ser Pro Val Pro		
	180	185
		190
Phe Val Leu Pro Glu Arg Ser Asn Ser Met Leu Tyr Ile Gly Ile Ala		
	195	200
		205
Glu Tyr Phe Phe Lys Ser Ala Ser Phe Ala His Phe Thr Ala Gly Val		
	210	215
		220
Phe Asn Leu Thr Leu Ser Thr Glu Glu Ile Ser Asn His Phe Val Gln		
225	230	235
		240
Asn Ser Gln Gly Leu Gly Asn Val Leu Ser Arg Ile Ala Glu Ile Tyr		
	245	250
		255
Ile Leu Ser Gln Pro Phe Met Val Arg Ile Met Ala Thr Glu Pro Pro		
	260	265
		270
Ile Ile Asn Leu Gln Pro Gly Asn Phe Thr Leu Asp Ile Pro Ala Ser		
	275	280
		285
Ile Met Met Leu Thr Gln Pro Lys Asn Ser Thr Val Glu Thr Ile Val		

290		295		300
Ser Met Asp Phe Val Ala Ser Thr Ser Val Gly Leu Val Ile Leu Gly				
305		310		315 320
Gln Arg Leu Val Cys Ser Leu Ser Leu Asn Arg Phe Arg Leu Ala Leu				
	325		330	335
Pro Glu Ser Asn Arg Ser Asn Ile Glu Val Leu Arg Phe Glu Asn Ile				
	340		345	350
Leu Ser Ser Ile Leu His Phe Gly Val Leu Pro Leu Ala Asn Ala Lys				
	355		360	365
Leu Gln Gln Gly Phe Pro Leu Pro Asn Pro His Lys Phe Leu Phe Val				
	370		375	380
Asn Ser Asp Ile Glu Val Leu Glu Gly Phe Leu Leu Ile Ser Thr Asp				
385		390		395 400
Leu Lys Tyr Glu Thr Ser Ser Lys Gln Gln Pro Ser Phe His Val Trp				
	405		410	415
Glu Gly Leu Asn Leu Ile Ser Arg Gln Trp Arg Gly Lys Ser Ala Pro				
	420		425	430

<210> 408

<211> 483

<212> PRT

<213> Homo sapiens

<400> 408

Met Ala Arg Gly Pro Cys Asn Ala Pro Arg Trp Val Ser Leu Met Val				
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Leu Val Ala Ile Gly Thr Ala Val Thr Ala Ala Val Asn Pro Gly Val				
	20		25	30
Val Val Arg Ile Ser Gln Lys Gly Leu Asp Tyr Ala Ser Gln Gln Gly				
	35		40	45
Thr Ala Ala Leu Gln Lys Glu Leu Lys Arg Ile Lys Ile Pro Asp Tyr				
	50		55	60

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Ser Asp Ser Phe Lys Ile Lys His Leu Gly Lys Gly His Tyr Ser Phe
 65 70 75 80
 Tyr Ser Met Asp Ile Arg Glu Phe Gln Leu Pro Ser Ser Gln Ile Ser
 85 90 95
 Met Val Pro Asn Val Gly Leu Lys Phe Ser Ile Ser Asn Ala Asn Ile
 100 105 110
 Lys Ile Ser Gly Lys Trp Lys Ala Gln Lys Arg Phe Leu Lys Met Ser
 115 120 125
 Gly Asn Phe Asp Leu Ser Ile Glu Gly Met Ser Ile Ser Ala Asp Leu
 130 135 140
 Lys Leu Gly Ser Asn Pro Thr Ser Gly Lys Pro Thr Ile Thr Cys Ser
 145 150 155 160
 Ser Cys Ser Ser His Ile Asn Ser Val His Val His Ile Ser Lys Ser
 165 170 175
 Lys Val Gly Trp Leu Ile Gln Leu Phe His Lys Lys Ile Glu Ser Ala
 180 185 190
 Leu Arg Asn Lys Met Asn Ser Gln Val Cys Glu Lys Val Thr Asn Ser
 195 200 205
 Val Ser Ser Lys Leu Gln Pro Tyr Phe Gln Thr Leu Pro Val Met Thr
 210 215 220
 Lys Ile Asp Ser Val Ala Gly Ile Asn Tyr Gly Leu Val Ala Pro Pro
 225 230 235 240
 Ala Thr Thr Ala Glu Thr Leu Asp Val Gln Met Lys Gly Glu Phe Tyr
 245 250 255
 Ser Glu Asn His His Asn Pro Pro Pro Phe Ala Pro Pro Val Met Glu
 260 265 270
 Phe Pro Ala Ala His Asp Arg Met Val Tyr Leu Gly Leu Ser Asp Tyr
 275 280 285
 Phe Phe Asn Thr Ala Gly Leu Val Tyr Gln Glu Ala Gly Val Leu Lys
 290 295 300
 Met Thr Leu Arg Asp Asp Met Ile Pro Lys Glu Ser Lys Phe Arg Leu
 305 310 315 320

Thr Thr Lys Phe Phe Gly Thr Phe Leu Pro Glu Val Ala Lys Lys Phe
 325 330 335

Pro Asn Met Lys Ile Gln Ile His Val Ser Ala Ser Thr Pro Pro His
 340 345 350

Leu Ser Val Gln Pro Thr Gly Leu Thr Phe Tyr Pro Ala Val Asp Val
 355 360 365

Gln Ala Phe Ala Val Leu Pro Asn Ser Ser Leu Ala Ser Leu Phe Leu
 370 375 380

Ile Gly Met His Thr Thr Gly Ser Met Glu Val Ser Ala Glu Ser Asn
 385 390 395 400

Arg Leu Val Gly Glu Leu Lys Leu Asp Arg Leu Leu Leu Glu Leu Lys
 405 410 415

His Ser Asn Ile Gly Pro Phe Pro Val Glu Leu Leu Gln Asp Ile Met
 420 425 430

Asn Tyr Ile Val Pro Ile Leu Val Leu Pro Arg Val Asn Glu Lys Leu
 435 440 445

Gln Lys Gly Phe Pro Leu Pro Thr Pro Ala Arg Val Gln Leu Tyr Asn
 450 455 460

Val Val Leu Gln Pro His Gln Asn Phe Leu Leu Phe Gly Ala Asp Val
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Val Tyr Lys

<210> 409

<211> 481

<212> PRT

<213> Homo sapiens

<400> 409

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Leu Thr Ser Thr Pro Glu Ala Leu Gly Ala Asn Pro Gly Leu Val Ala
 20 25 30

Arg Ile Thr Asp Lys Gly Leu Gln Tyr Ala Ala Gln Glu Gly Leu Leu
 35 40 45

Ala Leu Gln Ser Glu Leu Leu Arg Ile Thr Leu Pro Asp Phe Thr Gly
 50 55 60

Asp Leu Arg Ile Pro His Val Gly Arg Gly Arg Tyr Glu Phe His Ser
 65 70 75 80

Leu Asn Ile His Glu Phe Gln Leu Pro Ser Ser Gln Ile Ser Met Val
 85 90 95

Pro Asn Val Gly Leu Lys Phe Ser Ile Ser Asn Ala Asn Ile Lys Ile
 100 105 110

Ser Gly Lys Trp Lys Ala Gln Lys Arg Phe Leu Lys Met Ser Gly Asn
 115 120 125

Phe Asp Leu Ser Ile Glu Gly Met Ser Ile Ser Ala Asp Leu Lys Leu
 130 135 140

Gly Ser Asn Pro Thr Ser Gly Lys Pro Thr Ile Thr Cys Ser Ser Cys
 145 150 155 160

Ser Ser His Ile Asn Ser Val His Val His Ile Ser Lys Ser Lys Val
 165 170 175

Gly Trp Leu Ile Gln Leu Phe His Lys Lys Ile Glu Ser Ala Leu Arg
 180 185 190

Asn Lys Met Asn Ser Gln Val Cys Glu Lys Val Thr Asn Ser Val Ser
 195 200 205

Ser Lys Leu Gln Pro Tyr Phe Gln Thr Leu Pro Val Met Thr Lys Ile
 210 215 220

Asp Ser Val Ala Gly Ile Asn Tyr Gly Leu Val Ala Pro Pro Ala Thr
 225 230 235 240

Thr Ala Glu Thr Leu Asp Val Gln Met Lys Gly Glu Phe Tyr Ser Glu
 245 250 255

Asn His His Asn Pro Pro Pro Phe Ala Pro Pro Val Met Glu Phe Pro
 260 265 270

Ala Ala His Asp Arg Met Val Tyr Leu Gly Leu Ser Asp Tyr Phe Phe
 275 280 285

Asn Thr Ala Gly Leu Val Tyr Gln Glu Ala Gly Val Leu Lys Met Thr
 290 295 300

275		280		285											
Gly	Pro	Lys	Trp	Lys	Lys	Leu	Pro	Thr	Gly	Gly	Pro	Ala	Leu	Gln	Gly
290						295					300				
Val	Gln	Ile	Gly	Ala	Tyr	Gly	Thr	Asn	Thr	Thr	Asn	Ser	Ser	Arg	Asp
305					310					315					320
Lys	Asn	Asp	Ile	Ser	Ser	Asp	Lys	Thr	Ala	Gly	Ser	Ser	Gly	Phe	Gln
				325					330					335	
Ser	Arg	Thr	Ser	Thr	Cys	Gln	Ser	Ser	Ala	Ser	Ser	Ala	Ser	Leu	Arg
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Ser	Gln	Ser	Ser	Ile	Glu	Thr	Val	His	Asp	Glu	Ala	Glu	Leu	Glu	Arg
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<212>	PRT														
<213>	Homo sapiens														
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Leu	His	Ser	Glu	Gly	Ser	Gly	Gly	Lys	Leu	Thr	Ala	Val	Asp	Pro	Glu
			20					25					30		
Thr	Asn	Met	Asn	Val	Ser	Glu	Ile	Ile	Ser	Tyr	Trp	Gly	Phe	Pro	Ser
	35						40					45			
Glu	Glu	Tyr	Leu	Val	Glu	Thr	Glu	Asp	Gly	Tyr	Ile	Leu	Cys	Leu	Asn
	50					55					60				
Arg	Ile	Pro	His	Gly	Arg	Lys	Asn	His	Ser	Asp	Lys	Gly	Pro	Lys	Pro
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Val	Val	Phe	Leu	Gln	His	Gly	Leu	Leu	Ala	Asp	Ser	Ser	Asn	Trp	Val
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Thr	Asn	Leu	Ala	Asn	Ser	Ser	Leu	Gly	Phe	Ile	Leu	Ala	Asp	Ala	Gly
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Trp Arg Leu Tyr Asn Lys Ile Ile Asn Leu Met Arg Lys Tyr Gln
 385 390 395

<210> 412
 <211> 19
 <212> PRT
 <213> Homo sapiens

<400> 412
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Thr Leu Ala

<210> 413
 <211> 451
 <212> PRT
 <213> Homo sapiens

<400> 413
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Asn Gly Ala Asp Tyr Arg Gly Thr Gln Ser Trp Thr Ala Leu Gln Gly
 20 25 30

Gly Lys Pro Cys Leu Phe Trp Asn Glu Thr Phe Gln His Pro Tyr Asn
 35 40 45

Thr Leu Lys Tyr Pro Asn Gly Glu Gly Gly Leu Gly Glu His Asn Tyr
 50 55 60

Cys Arg Asn Pro Asp Gly Asp Val Ser Pro Trp Cys Tyr Val Ala Glu
 65 70 75 80

His Glu Asp Gly Val Tyr Trp Lys Tyr Cys Glu Ile Pro Ala Cys Gln
 85 90 95

Met Pro Gly Asn Leu Gly Cys Tyr Lys Asp His Gly Asn Pro Pro Pro
 100 105 110

Leu Thr Gly Thr Ser Lys Thr Ser Asn Lys Leu Thr Ile Gln Thr Cys

115	120	125
Ile Ser Phe Cys Arg Ser Gln Arg Phe Lys Phe Ala Gly Met Glu Ser		
130	135	140
Gly Tyr Ala Cys Phe Cys Gly Asn Asn Pro Asp Tyr Trp Lys His Gly		
145	150	155
		160
Glu Ala Ala Ser Thr Glu Cys Asn Ser Val Cys Phe Gly Asp His Thr		
	165	170
		175
Gln Pro Cys Gly Gly Asp Gly Arg Ile Ile Leu Phe Asp Thr Leu Val		
	180	185
		190
Gly Ala Cys Gly Gly Asn Tyr Ser Ala Met Ala Ala Val Val Tyr Ser		
	195	200
		205
Pro Asp Phe Pro Asp Thr Tyr Ala Thr Gly Arg Val Cys Tyr Trp Thr		
	210	215
		220
Ile Arg Val Pro Gly Ala Ser Arg Ile His Phe Asn Phe Thr Leu Phe		
225	230	235
		240
Asp Ile Arg Asp Ser Ala Asp Met Val Glu Leu Leu Asp Gly Tyr Thr		
	245	250
		255
His Arg Val Leu Val Arg Leu Ser Gly Arg Ser Arg Pro Pro Leu Ser		
	260	265
		270
Phe Asn Val Ser Leu Asp Phe Val Ile Leu Tyr Phe Phe Ser Asp Arg		
	275	280
		285
Ile Asn Gln Ala Gln Gly Phe Ala Val Leu Tyr Gln Ala Thr Lys Glu		
	290	295
		300
Glu Pro Pro Gln Glu Arg Pro Ala Val Asn Gln Thr Leu Ala Glu Val		
305	310	315
		320
Ile Thr Glu Gln Ala Asn Leu Ser Val Ser Ala Ala His Ser Ser Lys		
	325	330
		335
Val Leu Tyr Val Ile Thr Pro Ser Pro Ser His Pro Pro Gln Thr Ala		
	340	345
		350
Gln Val Ala Ile Pro Gly His Arg Gln Leu Gly Pro Thr Ala Thr Glu		
	355	360
		365
Trp Lys Asp Gly Leu Cys Thr Ala Trp Arg Pro Ser Ser Ser Ser Gln		

370

375

380

Ser Gln Gln Leu Ser Gln Arg Phe Phe Cys Met Ser His Leu Asn Leu
 385 390 395 400

Ile Glu Ser Leu His Gln Glu Thr Leu Gly Thr Val Val Ser Leu Gly
 405 410 415

Leu Leu Glu Ile Ser Gly Pro Phe Ser Met Asn Leu Pro Leu Gln Ser
 420 425 430

Pro Ser Leu Arg Arg Ser Ser Arg Val Arg Val Asn Lys Met Thr Ala
 435 440 445

Ile Pro Ser
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<210> 414

<211> 150

<212> PRT

<213> Homo sapiens

<400> 414

Lys Lys His Cys Trp Tyr Phe Glu Gly Leu Tyr Pro Thr Tyr Tyr Ile
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Cys Arg Ser Tyr Glu Asp Cys Cys Gly Ser Arg Cys Cys Val Arg Ala
 20 25 30

Leu Ser Ile Gln Arg Leu Trp Tyr Phe Trp Phe Leu Leu Met Met Gly
 35 40 45

Val Leu Phe Cys Cys Gly Ala Gly Phe Phe Ile Arg Arg Arg Met Tyr
 50 55 60

Pro Pro Pro Leu Ile Glu Glu Pro Thr Phe Asn Val Ser Tyr Thr Arg
 65 70 75 80

Gln Pro Pro Asn Pro Ala Pro Gly Ala Gln Gln Met Gly Pro Pro Tyr
 85 90 95

Tyr Thr Asp Pro Gly Gly Pro Gly Met Asn Pro Val Gly Asn Thr Met
 100 105 110

Ala Met Ala Phe Gln Val Gln Pro Asn Ser Pro His Gly Gly Thr Thr
 115 120 125

Tyr Pro Pro Pro Pro Ser Tyr Cys Asn Thr Pro Pro Pro Pro Tyr Glu
 130 135 140

Gln Val Val Lys Asp Lys
 145 150

<210> 415
 <211> 2044
 <212> DNA
 <213> Homo sapiens

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Ser Glu Ile Ile Gln His Gln Gly Tyr Pro Cys Glu Glu Tyr Glu Val
 20 25 30
 Ala Thr Glu Asp Gly Tyr Ile Leu Ser Val Asn Arg Ile Pro Arg Gly
 35 40 45
 Leu Val Gln Pro Lys Lys Thr Gly Ser Arg Pro Val Val Leu Leu Gln
 50 55 60
 His Gly Leu Val Gly Gly Ala Ser Asn Trp Ile Ser Asn Leu Pro Asn
 65 70 75 80
 Asn Ser Leu Gly Phe Ile Leu Ala Asp Ala Gly Phe Asp Val Trp Met
 85 90 95
 Gly Asn Ser Arg Gly Asn Ala Trp Ser Arg Lys His Lys Thr Leu Ser
 100 105 110
 Ile Asp Gln Asp Glu Phe Trp Ala Phe Ser Tyr Asp Glu Met Ala Arg
 115 120 125
 Phe Asp Leu Pro Ala Val Ile Asn Phe Ile Leu Gln Lys Thr Gly Gln
 130 135 140
 Glu Lys Ile Tyr Tyr Val Gly Tyr Ser Gln Gly Thr Thr Met Gly Phe
 145 150 155 160
 Ile Ala Phe Ser Thr Met Pro Glu Leu Ala Gln Lys Ile Lys Met Tyr
 165 170 175
 Phe Ala Leu Ala Pro Ile Ala Thr Val Lys His Ala Lys Ser Pro Gly
 180 185 190
 Thr Lys Phe Leu Leu Leu Pro Asp Met Met Ile Lys Gly Leu Phe Gly
 195 200 205
 Lys Lys Glu Phe Leu Tyr Gln Thr Arg Phe Leu Arg Gln Leu Val Ile
 210 215 220
 Tyr Leu Cys Gly Gln Val Ile Leu Asp Gln Ile Cys Ser Asn Ile Met
 225 230 235 240
 Leu Leu Leu Gly Gly Phe Asn Thr Asn Asn Met Asn Met Ser Arg Ala
 245 250 255
 Ser Val Tyr Ala Ala His Thr Leu Ala Gly Thr Ser Val Gln Asn Ile
 260 265 270

	85		90		95
Gly Asn Ser Arg Gly Asn Ala Trp Ser Arg Lys His Lys Thr Leu Ser					
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Ile Asp Gln Asp Glu Phe Trp Ala Phe Ser Tyr Asp Glu Met Ala Arg					
	115		120		125
Phe Asp Leu Pro Ala Val Ile Asn Phe Ile Leu Gln Lys Thr Gly Gln					
	130		135		140
Glu Lys Ile Tyr Tyr Val Gly Tyr Ser Gln Gly Thr Thr Met Gly Phe					
	145		150		155
Ile Ala Phe Ser Thr Met Pro Glu Leu Ala Gln Lys Ile Lys Met Tyr					
	165		170		175
Phe Ala Leu Ala Pro Ile Ala Thr Val Lys His Ala Lys Ser Pro Gly					
	180		185		190
Thr Lys Phe Leu Leu Leu Pro Asp Met Met Ile Lys Gly Leu Phe Gly					
	195		200		205
Lys Lys Glu Phe Leu Tyr Gln Thr Arg Phe Leu Arg Gln					
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<210> 421
 <211> 25
 <212> PRT
 <213> Homo sapiens

<400> 421
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<210> 422
 <211> 144
 <212> PRT
 <213> Homo sapiens

<400> 422
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<210> 424

<211> 1029

<212> DNA

<213> Homo sapiens

<400> 424

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1029

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<211> 343

<212> PRT

<213> Homo sapiens

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Thr Ala Leu Ala Thr Phe Ile Val Ile Leu Pro Gly Ile Arg Gly Lys
35 40 45

Thr Arg Leu Phe Trp Leu Leu Arg Val Val Thr Ser Leu Phe Ile Gly
50 55 60

Ala Ala Ile Leu Ala Val Asn Phe Ser Ser Glu Trp Ser Val Gly Gln
65 70 75 80

Val Ser Thr Asn Thr Ser Tyr Lys Ala Phe Ser Ser Glu Trp Ile Ser
85 90 95

Ala Asp Ile Gly Leu Gln Val Gly Leu Gly Gly Val Asn Ile Thr Leu
100 105 110

Thr Gly Thr Pro Val Gln Gln Leu Asn Glu Thr Ile Asn Tyr Asn Glu
115 120 125

Glu Phe Thr Trp Arg Leu Gly Glu Asn Tyr Ala Glu Glu Cys Ala Lys
130 135 140

Ala Leu Glu Lys Gly Leu Pro Asp Pro Val Leu Tyr Leu Ala Glu Lys
145 150 155 160

Phe Thr Pro Arg Ser Pro Cys Gly Leu Tyr Arg Gln Tyr Arg Leu Ala
165 170 175

Gly His Tyr Thr Ser Ala Met Leu Trp Val Ala Phe Leu Cys Trp Leu
180 185 190

Leu Ala Asn Val Met Leu Ser Met Pro Val Leu Val Tyr Gly Gly Tyr
195 200 205

Met Leu Leu Ala Thr Gly Ile Phe Gln Leu Leu Ala Leu Leu Phe Phe
 210 215 220

Ser Met Ala Thr Ser Leu Thr Ser Pro Cys Pro Leu His Leu Gly Ala
 225 230 235 240

Ser Val Leu His Thr His His Gly Pro Ala Phe Trp Ile Thr Leu Thr
 245 250 255

Thr Gly Leu Leu Cys Val Leu Leu Gly Leu Ala Met Ala Val Ala His
 260 265 270

Arg Met Gln Pro His Arg Leu Lys Ala Phe Phe Asn Gln Ser Val Asp
 275 280 285

Glu Asp Pro Met Leu Glu Trp Ser Pro Glu Glu Gly Gly Leu Leu Ser
 290 295 300

Pro Arg Tyr Arg Ser Met Ala Asp Ser Pro Lys Ser Gln Asp Ile Pro
 305 310 315 320

Leu Ser Glu Ala Ser Ser Thr Lys Ala Tyr Cys Lys Glu Ala His Pro
 325 330 335

Lys Asp Pro Asp Cys Ala Leu
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<210> 426
 <211> 23
 <212> PRT
 <213> Homo sapiens

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<210> 427
 <211> 112
 <212> PRT
 <213> Homo sapiens

<400> 427
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 35 40 45
 Gln Leu Asn Glu Thr Ile Asn Tyr Asn Glu Glu Phe Thr Trp Arg Leu
 50 55 60
 Gly Glu Asn Tyr Ala Glu Glu Cys Ala Lys Ala Leu Glu Lys Gly Leu
 65 70 75 80
 Pro Asp Pro Val Leu Tyr Leu Ala Glu Lys Phe Thr Pro Arg Ser Pro
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 Cys Gly Leu Tyr Arg Gln Tyr Arg Leu Ala Gly His Tyr Thr Ser Ala
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<210> 428

<211> 22

<212> PRT

<213> Homo sapiens

<400> 428

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His Thr His His Gly Pro
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<210> 429

<211> 19

<212> PRT

<213> Homo sapiens

<400> 429

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Val Ile Leu

<210> 430
 <211> 20
 <212> PRT
 <213> Homo sapiens

<400> 430
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 Ile Leu Ala Val
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<210> 431
 <211> 22
 <212> PRT
 <213> Homo sapiens

<400> 431
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 Ser Met Pro Val Leu Val
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<210> 432
 <211> 17
 <212> PRT
 <213> Homo sapiens

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<210> 433
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 <212> PRT
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<400> 433
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<210> 437
 <211> 4928
 <212> DNA
 <213> Mus sp.

<400> 437

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<211> 1410

<212> DNA

<213> Mus sp.

<400> 438

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<210> 439

<211> 470

<212> PRT

<213> Mus sp.

<400> 439

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35 40 45
Leu Gln Gly Gly Lys Pro Cys Leu Phe Trp Asn Glu Thr Phe Gln His
50 55 60
Pro Tyr Asn Thr Leu Lys Tyr Pro Asn Gly Glu Gly Gly Leu Gly Glu
65 70 75 80

His	Asn	Tyr	Cys	Arg	Asn	Pro	Asp	Gly	Asp	Val	Ser	Pro	Trp	Cys	Tyr	85	90	95
Val	Ala	Glu	His	Glu	Asp	Gly	Val	Tyr	Trp	Lys	Tyr	Cys	Glu	Ile	Pro	100	105	110
Ala	Cys	Gln	Met	Pro	Gly	Asn	Leu	Gly	Cys	Tyr	Lys	Asp	His	Gly	Asn	115	120	125
Pro	Pro	Pro	Leu	Thr	Gly	Thr	Ser	Lys	Thr	Ser	Asn	Lys	Leu	Thr	Ile	130	135	140
Gln	Thr	Cys	Ile	Ser	Phe	Cys	Arg	Ser	Gln	Arg	Phe	Lys	Phe	Ala	Gly	145	150	155
Met	Glu	Ser	Gly	Tyr	Ala	Cys	Phe	Cys	Gly	Asn	Asn	Pro	Asp	Tyr	Trp	165	170	175
Lys	His	Gly	Glu	Ala	Ala	Ser	Thr	Glu	Cys	Asn	Ser	Val	Cys	Phe	Gly	180	185	190
Asp	His	Thr	Gln	Pro	Cys	Gly	Gly	Asp	Gly	Arg	Ile	Ile	Leu	Phe	Asp	195	200	205
Thr	Leu	Val	Gly	Ala	Cys	Gly	Gly	Asn	Tyr	Ser	Ala	Met	Ala	Ala	Val	210	215	220
Val	Tyr	Ser	Pro	Asp	Phe	Pro	Asp	Thr	Tyr	Ala	Thr	Gly	Arg	Val	Cys	225	230	235
Tyr	Trp	Thr	Ile	Arg	Val	Pro	Gly	Ala	Ser	Arg	Ile	His	Phe	Asn	Phe	245	250	255
Thr	Leu	Phe	Asp	Ile	Arg	Asp	Ser	Ala	Asp	Met	Val	Glu	Leu	Leu	Asp	260	265	270
Gly	Tyr	Thr	His	Arg	Val	Leu	Val	Arg	Leu	Ser	Gly	Arg	Ser	Arg	Pro	275	280	285
Pro	Leu	Ser	Phe	Asn	Val	Ser	Leu	Asp	Phe	Val	Ile	Leu	Tyr	Phe	Phe	290	295	300
Ser	Asp	Arg	Ile	Asn	Gln	Ala	Gln	Gly	Phe	Ala	Val	Leu	Tyr	Gln	Ala	305	310	315
Thr	Lys	Glu	Glu	Pro	Pro	Gln	Glu	Arg	Pro	Ala	Val	Asn	Gln	Thr	Leu	325	330	335

Ala Glu Val Ile Thr Glu Gln Ala Asn Leu Ser Val Ser Ala Ala His
 340 345 350

Ser Ser Lys Val Leu Tyr Val Ile Thr Pro Ser Pro Ser His Pro Pro
 355 360 365

Gln Thr Ala Gln Val Ala Ile Pro Gly His Arg Gln Leu Gly Pro Thr
 370 375 380

Ala Thr Glu Trp Lys Asp Gly Leu Cys Thr Ala Trp Arg Pro Ser Ser
 385 390 395 400

Ser Ser Gln Ser Gln Gln Leu Ser Gln Arg Phe Phe Cys Met Ser His
 405 410 415

Leu Asn Leu Ile Glu Ser Leu His Gln Glu Thr Leu Gly Thr Val Val
 420 425 430

Ser Leu Gly Leu Leu Glu Ile Ser Gly Pro Phe Ser Met Asn Leu Pro
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Met Thr Ala Ile Pro Ser
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<210> 440
 <211> 760
 <212> PRT
 <213> Mus sp.

<400> 440

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Thr Gly Gly Gln Gly Pro Met Pro Arg Val Lys Tyr His Ala Gly Asp
 35 40 45

Gly His Arg Ala Leu Ser Phe Phe Gln Gln Lys Gly Leu Arg Asp Phe
 50 55 60

Asp Thr Leu Leu Leu Ser Asp Asp Gly Asn Thr Leu Tyr Val Gly Ala
 65 70 75 80

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610 615 620

Ala Thr Glu Asn Gly Tyr Ser Tyr Pro Val Val Ser Tyr Trp Val Asp
625 630 635 640

Ser Gln Asp Gln Pro Leu Ala Leu Asp Pro Glu Leu Ala Gly Val Pro
645 650 655

Arg Glu Arg Val Gln Val Pro Leu Thr Arg Val Gly Gly Gly Ala Ser
660 665 670

Met Ala Ala Gln Arg Ser Tyr Trp Pro His Phe Leu Ile Val Thr Val
675 680 685

Leu Leu Ala Ile Val Leu Leu Gly Val Leu Thr Leu Leu Leu Ala Ser
690 695 700

Pro Leu Gly Ala Leu Arg Ala Arg Gly Lys Val Gln Gly Cys Gly Met
705 710 715 720

Leu Pro Pro Arg Glu Lys Ala Pro Leu Ser Arg Asp Gln His Leu Gln
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Asn His Leu Gly Ala Glu Val Ala
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<211> 3046
<212> PRT
<213> Mus sp.

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Gly Gly Gly Gly Ala Ala Cys Cys Ala Thr Cys Thr Gly Gly Thr Gly

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Thr Cys Thr Cys Thr Cys Ala Cys Gly Gly Ala Cys Ala Thr Thr Gly		
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1125	1130	1135
Ala Ala Cys Ala Ala Gly Gly Ala Gly Ala Cys Cys Thr Cys Cys Cys		
1140	1145	1150
Gly Cys Thr Gly Gly Ala Cys Cys Ala Cys Thr Thr Ala Cys Cys Gly		
1155	1160	1165
Gly Gly Gly Cys Thr Cys Ala Gly Ala Gly Gly Thr Cys Ala Gly Cys		
1170	1175	1180
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Cys Thr Gly Gly Thr Gly Thr Gly Gly Ala Gly Thr Ala Cys Ala Cys		
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Thr Cys Ala Gly Cys Thr Cys Gly Gly Gly Gly Cys Cys Thr Thr Gly		
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	1425	1430 1435 1440
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	1445	1450 1455
Thr Gly Ala Cys Thr Cys Thr Gly Ala Gly Cys Cys Thr Gly Thr Thr		
	1460	1465 1470
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	1475	1480 1485
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1570 1575 1580

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Ala Ala Gly Cys Ala Gly Gly Ala Cys Ala Thr Gly Gly Ala Ala Cys			
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	1730	1735	1740
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Cys Thr Gly Thr Cys Ala Gly Cys Ala Cys Thr Gly Gly Cys Cys Thr			
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Cys Thr Thr Ala Cys Cys Ala Cys Thr Gly Gly Ala Gly Thr Cys Ala			

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Cys Thr Cys Thr Cys Cys Thr Cys Cys Thr Cys Gly Cys Thr Thr Cys	2165	2170	2175
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Pro Tyr Gly Lys Lys Asn Ser Gly Asn Thr Gly Gln Arg Pro Val Val
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Phe Leu Gln His Gly Leu Leu Ala Ser Ala Thr Asn Trp Ile Ser Asn
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Leu Pro Asn Asn Ser Leu Ala Phe Ile Leu Ala Asp Ala Gly Tyr Asp
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Val Trp Leu Gly Asn Ser Arg Gly Asn Thr Trp Ala Arg Arg Asn Leu
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Tyr Tyr Ser Pro Asp Ser Val Glu Phe Trp Ala Phe Ser Phe Asp Glu
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Met Ala Lys Tyr Asp Leu Pro Ala Thr Ile Asp Phe Ile Val Lys Lys
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Thr Gly Gln Lys Gln Leu His Tyr Val Gly His Ser Gln Gly Thr Thr
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Ile Gly Phe Ile Ala Phe Ser Thr Asn Pro Ser Leu Ala Lys Arg Ile
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Ser Leu Ile Asn Lys Leu Arg Phe Val Pro Gln Ser Leu Phe Lys Phe
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Ile Phe Gly Asp Lys Ile Phe Tyr Pro His Asn Phe Phe Asp Gln Phe
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Ser Arg Leu Asp Val Tyr Leu Ser His Asn Pro Ala Gly Thr Ser Val
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Gln Asn Met Phe His Trp Thr Gln Ala Val Lys Ser Gly Lys Phe Gln
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Ser Gln Pro Pro Tyr Tyr Asn Val Thr Ala Met Asn Val Pro Ile Ala
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Val Trp Asn Gly Gly Lys Asp Leu Leu Ala Asp Pro Gln Asp Val Gly
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Leu Leu Leu Pro Lys Leu Pro Asn Leu Ile Tyr His Lys Glu Ile Pro
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Gly Val His Arg Cys Glu Gly Arg Val Glu Val Lys His Gln Gly Glu
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Trp Gly Thr Val Asp Gly Tyr Arg Trp Thr Leu Lys Asp Ala Ser Val
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Val Cys Arg Gln Leu Gly Cys Gly Ala Ala Ile Gly Phe Pro Gly Gly
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Ala Tyr Phe Gly Pro Gly Leu Gly Pro Ile Trp Leu Leu Tyr Thr Ser
      85              90              95

Cys Glu Gly Thr Glu Ser Thr Val Ser Asp Cys Glu His Ser Asn Ile
      100              105              110

Lys Asp Tyr Arg Asn Asp Gly Tyr Asn His Gly Arg Asp Ala Gly Val
      115              120              125

Val Cys Ser Gly Phe Val Arg Leu Ala Gly Gly Asp Gly Pro Cys Ser
      130              135              140

Gly Arg Val Glu Val His Ser Gly Glu Ala Trp Ile Pro Val Ser Asp
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Gly Asn Phe Thr Leu Ala Thr Ala Gln Ile Ile Cys Ala Glu Leu Gly
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Cys Gly Lys Ala Val Ser Val Leu Gly His Glu Leu Phe Arg Glu Ser
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Ser Ala Gln Val Trp Ala Glu Glu Phe Arg Cys Glu Gly Glu Glu Pro
 195 200 205

Glu Leu Trp Val Cys Pro Arg Val Pro Cys Pro Gly Gly Thr Cys His
 210 215 220

His Ser Gly Ser Ala Gln Val Val Cys Ser Ala Tyr Ser Glu Val Arg
 225 230 235 240

Leu Met Thr Asn Gly Ser Ser Gln Cys Glu Gly Gln Val Glu Met Asn
 245 250 255

Ile Ser Gly Gln Trp Arg Ala Leu Cys Ala Ser His Trp Ser Leu Ala
 260 265 270

Asn Ala Asn Val Ile Cys Arg Gln Leu Gly Cys Gly Val Ala Ile Ser
 275 280 285

Thr Pro Gly Gly Pro His Leu Val Glu Glu Gly Asp Gln Ile Leu Thr
 290 295 300

Ala Arg Phe His Cys Ser Gly Ala Glu Ser Phe Leu Trp Ser Cys Pro
 305 310 315 320

Val Thr Ala Leu Gly Gly Pro Asp Cys Ser His Gly Asn Thr Ala Ser
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Val Ile Cys Ser Gly Asn Gln Ile Gln Val Leu Pro Gln Cys Asn Asp
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Ser Val Ser Gln Pro Thr Gly Ser Ala Ala Ser Glu Asp Ser Ala Pro
 355 360 365

Tyr Cys Ser Asp Ser Arg Gln Leu Arg Leu Val Asp Gly Gly Gly Pro
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Cys Ala Gly Arg Val Glu Ile Leu Asp Gln Gly Ser Trp Gly Thr Ile
 385 390 395 400

Cys Asp Asp Gly Trp Asp Leu Asp Asp Ala Arg Val Val Cys Arg Gln
 405 410 415

Leu Gly Cys Gly Glu Ala Leu Asn Ala Thr Gly Ser Ala His Phe Gly
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Glu Ile Leu Asp Gln Gly Ser Trp Gly Thr Ile Cys Asp Asp Asp Trp			
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Ala Leu Asn Ala Thr Gly Ser Ala His Phe Gly Ala Gly Ser Gly Pro			
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Arg Cys Pro Ser Arg Gly Trp Gly Arg His Asp Cys Arg His Lys Glu			
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Glu Asp Gln Gln Cys Ala Gly Trp Leu Glu Val Phe Tyr Asn Gly Thr			
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Trp Gly Ser Val Cys Arg Ser Pro Met Glu Asp Ile Thr Val Ser Val			
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Ile Cys Arg Gln Leu Gly Cys Gly Asp Ser Gly Ser Leu Asn Thr Ser			
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Val Gly Leu Arg Glu Gly Ser Arg Pro Arg Trp Val Asp Leu Ile Gln			
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Cys Arg Lys Met Asp Thr Ser Leu Trp Gln Cys Pro Ser Gly Pro Trp			
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Lys Tyr Ser Ser Cys Ser Pro Lys Glu Glu Ala Tyr Ile Ser Cys Glu			
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Glu Val Trp His Asn Gly Ser Trp Gly Thr Val Cys Asp Asp Ser Trp			
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Leu Pro Gly Val Leu Cys Leu Ile Leu Gly Ser Leu Leu Phe Leu Val
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Leu Val Ile Leu Val Thr Gln Leu Leu Arg Trp Arg Ala Glu Arg Arg
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Leu Asp Tyr Leu Leu Thr Gln Lys Glu Gly Leu Gly Ser Pro Asp Gln
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Pro Glu Lys Glu Asp Gly Val Arg Ser Ser Gln Thr Gly Ser Phe Leu
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<210> 450

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Domain
Consensus Sequence

<220>

<223> Residue 1 is L or I or V

<220>

<223> Residue 2 is any amino acid residue

<220>

<223> Residue 3 is L or I or V

<220>

<223> One or both of residues 4 and 5 can be present;
when present, each of residues 4 and 5 is any
amino acid residue

<220>

<223> Residue 7 is any amino acid residue

<220>

<223> Residue 10 is N or H

<220>

<223> Residue 11 is any amino acid residue

<400> 450

Xaa Xaa Xaa Xaa Xaa Asp Xaa Asn Asp Xaa Xaa Pro
1 5 10

<210> 451

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Domain
Consensus Sequence

<220>

<223> Residue 1 is L, I, A, or T

<220>

<223> Each of residues is any amino acid residue

<220>

<223> One or both of residues 6 and 7 can be present;
when present, each of residues 6 and 7 is any
amino acid residue

<220>

<223> Residue 8 is P or E

<220>

<223> Each of residues 9 and 10 is any amino acid
residue

<220>

<223> Residue 11 is L, I, V, M, F, or Y

<220>

<223> Residue 12 is D, E, N, Q, or S

<220>

<223> Residue 13 is S, T, or A

<220>

<223> Residue 14 is A or V

<220>

<223> Residue 15 is L, I, V, M, F, or Y

<400> 451

Xaa Xaa Xaa Xaa Trp Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1 5 10 15

<210> 452

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Domain
Consensus Sequence

<220>

<223> Residue 1 is G, S, T, A, L, I, V, or N

<220>

<223> Each of residues 2 and 3 is any amino acid residue

<220>

<223> Residue 6 is L, I, V, M, F, Y, or W

<220>

<223> Residue 7 is D, E, G, H, R, K, or P

<220>

<223> Residue 9 is any amino acid residue

<220>

<223> Residue 10 is L, I, V, M, F, Y, W, G, S, P, or Q

<400> 452

Xaa Xaa Xaa His Glu Xaa Xaa His Xaa Xaa

1

5

10

<210> 453

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Domain
Consensus Sequence

<220>

<223> Residue 4 is G or N

<220>

<223> Residue 5 is any amino acid residue

<220>

<223> Residue 7 is D or R

<220>

<223> Residue 8 is L, I, V, S, A, P, K, or Q

<400> 453

Pro Arg Cys Xaa Xaa Pro Xaa Xaa

1

5

<210> 454

<211> 38

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Domain
Consensus Sequence

<220>

<223> Each of residues 1-12, 14-16, 18, 27, and 29-37 is
any amino acid residue

<220>

<223> Residue 26 is D, E, or N

<220>

<223> Residue 28 is L, I, V, M, F, or Y

<220>

<223> Residue 38 is F, Y, or W

<400> 454

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Glu Xaa Xaa Xaa

1

5

10

15

Glu Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa

20

25

30

Xaa Xaa Xaa Xaa Xaa Xaa

35

<210> 455

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Domain
Consensus Sequence

<220>

<223> Residue 1 is F or Y

<220>

<223> Residue 6 is D, N, or R

<400> 455

Xaa Cys Arg Asn Pro Xaa

1

5

<210> 456

<211> 38

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Domain
Consensus Sequence

<220>

<223> Each of residues 2-6, 8, 9, 11-16, 22-24, 26-33,
and 35-37 is any amino acid residue

<220>

<223> Residue 25 is F, Y, or W

<400> 456

Gly Xaa Xaa Xaa Xaa Xaa Gly Xaa Xaa Glu Xaa Xaa Xaa Xaa Xaa Xaa
1 5 10 15

Trp Gly Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
20 25 30

Xaa Cys Xaa Xaa Xaa Gly
35

<210> 457

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Domain
Consensus Sequence

<220>

<223> Each of residues 1-3, 5, 8-11, and 15-22 is any
amino acid residue

<220>

<223> Residue 6 can be absent; when present, it is any
amino acid residue

<220>

<223> Residue 13 can be absent; when present, it is any
amino acid residue

<220>

<223> Residue 7 is E or Q

<220>

<223> Residue 12 is L, I, V, or M

<220>

<223> Residue 14 is E, Q, or K

<400> 457

Xaa Xaa Xaa Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1 5 10 15

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Pro

<210> 458
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Leucine Zipper
 Region of TANGO 366

<400> 458

Leu Asp Leu Ser Gly Thr Asn Leu Val Pro Leu Pro Glu Ala Leu Leu
 1 5 10 15

Leu His Leu Pro Ala Leu
 20

<210> 459
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Leucine Zipper
 Region of INTERCEPT 217

<400> 459

Leu Ser Cys Thr Gly Leu Gly Leu Gln Asp Val Pro Ala Glu Leu Pro
 1 5 10 15

Ala Ala Thr Ala Asp Leu
 20

<210> 460
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Leucine Zipper
 Region of TANGO 331

<400> 460

Leu Glu Ala Gln Glu Glu His Leu Glu Ala Trp Trp Leu Gln Leu Lys

1

5

10

15

Ser Glu Tyr Pro Asp Leu

20

[illegible]